

MONTANA

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FIFTY CENTS



OUTDOORS



WHERE IS MONTANA GROWING?

turn to page 11

MONTANA

OUTDOORS

the official publication of the
Montana Department of Fish and Game
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state of montana



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the cover

Where is Montana growing? If Montana is indeed growing in the wrong direction or in the wrong manner, can the course be changed? If so, how can it be changed? Should it be changed? In our special section starting on page 11, we take up the very evasive and complex growth issue and attempt to answer these questions. We view growth as the—or at least one of the—most vital issues facing Montana today. The original watercolors on the front cover and page 11 are by staffer Donito Eaton. Back cover photo by Jon Cates.

features

2 we've never met an animal we didn't like

Dennis Flath explains the department's new nongame species program

7 the end of living and beginning of survival?

what will project independence mean to montana? guest editorial by Gary Wicks

11 WHERE IS MONTANA GROWING?

a special section with features and shorts on several aspects of growth and land development

12 a look back

Tina Torggrimson chronologically paints the history of land use—from Lewis and Clark to today

18 growth

is it benign or malignant? by Bill Cunningham

26 the gallatin

a good example of where montana is growing. by Bill Schneider

34 land use study

the montana environmental quality council presents a framework for state land use policy. by Ronald J. Schleyer

43 the federal take-over

are montanans unknowingly encouraging federal control of wildlife management? by Harley Yeager

46 happiness is a haystack

Vern Craig describes the life of a pika, a lonely, but happy, dweller of montana's high, rocky places

48 how many miles of "unbeatable trout streams" left?

guest editorial writer George F. Grant questions montana's promotion policies

departments

1 director's column

39 catchall

10 dear F&G

42 book reviews

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THE
GROWTH
ISSUE

a livable environment for WILDLIFE is a quality environment for MAN

Over the past several years, we have attempted to initiate the new year in *Montana Outdoors* with articles and discussions about issues which we consider of prime importance to state wildlife. For example, we devoted the Jan./Feb. 1974 issue to *land subdivision* in Montana and the corresponding impact of such development on wildlife. In the Jan./Feb. 1973 issue, we discussed problems for wildlife related to development of eastern Montana *coal resources*. And in 1972, we devoted space in MO to the threat to sportsmen and Montana wildlife created by the nationwide *anti-hunting movement*.

To initiate 1975, we again picked an issue which we consider of paramount importance to the future of Montana wildlife, Montana sportsmen and essentially, to the Montana "way of life"—the issue of *growth*. Most states faced this issue in the past—and many, like Montana, continue to face it now.

But Montana is unique because we still have available to us the choice of whether we want a "growth ethic" to govern our future and that of coming generations—or whether, as has happened in other states, we let things "happen as they may"—and end up with unwanted and haphazard development. We still have time to decide on our future—how much growth we want and where it should go. We can still develop a "growth ethic."

Some will say our department has no business meddling in such matters, that we're way off base and completely out of our element, and that we should stick to what we're supposed to be doing—providing hunting and fishing. To such accusations, we can only say that the issue of growth *directly* affects our business, and that we would seriously fail our responsibilities if we neglected to discuss it. And we might suggest to those making such accusations that they compare Montana with other states such as Colorado where growth of one kind or another has practically eliminated the things we cherish in this state—low population density, clean air and water, lots of space and ample opportunity for enjoyment of natural surroundings and the wildlife which abounds in such an environment.

We feel the growth issue and what Montanans intend to do about it offers one of the more important questions facing this state in the 70s. But we look to the future with a degree of pessimism because most sportsmen, and the general public as well, appear apathetic about expressing their views on Montana's future. People care about where the state is headed and how fast we get there. Most are quick to elaborate on why they like it here, and most often, you hear them talk about the good hunting and fishing, the clean air and beautiful country. But few express themselves effectively. Nearly everyone who has given this matter any thought at all possesses specific convictions. These convictions could form the basis for future actions and policy governing growth in Montana, or, in other words, they could form a "growth ethic." But people must take an active interest and let their views be known.

We intend to continue talking about issues such as growth, subdivision development and others, because these things can forever change the face of this state. We have an obligation to talk about these issues. But more important, sportsmen and the public also have an obligation to express their concern. It's going to take a great deal of effort on the part of us all to insure that Montana retains those features most of us appreciate and enjoy. 🐾

Wes Woodgerd, Director
Department of Fish and Game





We've never met an animal we didn't like

by Dennis Flath

—nongame program takes off—



For many decades, wildlife management has been directed toward game species. Just witness habitat acquisition and improvement, wetlands development and other such measures. Now, however, it's time for nongame wildlife—the “poor cousins” of the popular game species—to take their turn.

An article, “Singing a Song for Unsung Wildlife,” in the March/April 1974 *Montana Outdoors*, elicited comments from many readers who agreed it was about time some attention was given to the wondrous multitude of nongame species which share man's environment. We couldn't agree more!

The Montana Department of Fish and Game now has an opportunity to do something about nongame wildlife conservation. Recently passed federal and state legislation provides both authority and a mandate to “conserve” nongame and endangered species.

continued

(far left) *The American bittern.* photo by Jon Cates. (top) *Wildlife photography, one important use of nongame species.* F&G photo by Craig Sharpe. (bottom) *The fox squirrel.* photo by Bob Cooney.



The peregrine falcon, an endangered species. photo by Jon Cates

The federal Endangered Species Act of 1973 establishes two categories to indicate the degree of danger a particular wildlife species faces. An "endangered" species is in danger of becoming extinct in the foreseeable future. If a species *may become* "endangered," it can be classified as "threatened." A species may be classified as "threatened" or "endangered" throughout all or a *portion* of its natural range. Thus, positive management measures can be applied to populations in a specific geographical location.

Under the federal act, states can obtain grant-in-aid funding through the Secretary of Interior's office for conservation of endangered species. To qualify, the state must demonstrate: (1) the authority to conserve threatened or endangered species, (2) the authority to conduct scientific investigations, (3) the authority to acquire habitat, (4) the authority to provide for public

participation in determining the status of species and (5) an established, suitable program for conservation of threatened and endangered species.

THE MONTANA LAW

The federal legislation covers only those species in trouble. However, the Montana law calls for conservation of *all* nongame species. The Montana "Nongame and Endangered Species Conservation Act" defines nongame wildlife as those wild mammals, birds, reptiles, amphibians, fishes, mollusks and crustaceans not otherwise classified by statute or regulation. Amazingly, this encompasses nearly 700 different species of Montana wildlife.

Within the framework of this legislation, the Department of Fish and Game established a nongame and endangered species resource program. The primary goal is to assure perpetuation of the diverse nongame wildlife in

Montana. Specific activities include research and management, enhancement, protection and control of nongame species and their habitats.

ENVIRONMENTAL INDICATORS

The welfare of wildlife populations is inextricably tied to the quality and quantity of available habitat. This precept applies to mice and moose alike: A healthy habitat produces healthy wildlife populations. And nongame species rank among the most reliable indicators of the land's vigor, diversity and stability.

In the web of life, a diverse and complex fauna indicates ecological stability. When a species disappears, an imbalance occurs since the influence of the missing species is no longer felt. If nature's system of checks and balances is disrupted, populations of some species may rapidly expand, while others may become extinct. An exploding population

severely damages the habitat which supports it. The best solution to such problems is preventive rather than corrective action. By monitoring species diversity and population levels of nongame wildlife, researchers can determine when and where the ecological integrity of Montana is at stake.

But nongame wildlife has value far beyond its use as an environmental indicator. Simply taking the time to see, hear and enjoy nature at her best can be a rewarding experience. Have you ever sat quietly beside a stream and listened to a wood warbler—the colorful “butterfly” of the bird kingdom? The careful observer and listener is rewarded with song and a display of color which has few parallels in nature. And, it doesn't take a trained biologist to appreciate the contribution songbirds make to the environment.

You needn't travel to the country to enjoy nongame wildlife. City parks, golf courses and backyards sustain a variety of birds and small mammals. Many people maintain bird feeders and derive immense enjoyment from watching the parade of colorful song birds.

MONTANA'S ENDANGERED SPECIES

A list of Montana's endangered species was adopted by the Montana Fish and Game Commission in June 1974. These endangered species—American peregrine falcon, northern Rocky Mountain wolf, black-footed ferret and whooping crane—require special attention if they are to remain a part of Montana's fauna.

Each of these endangered species has a different history and faces different perils in its daily existence:

- Advanced technology has victimized the noble peregrine falcon. Synthetic pollutants, mostly DDT and its metabolite DDE, cause eggshell thinning which, in turn, results in poor reproductive success. Obviously, without young, the species cannot survive.
- The Northern Rocky Mountain wolf has been persecuted under

the guise of predator control. Once considered extinct, recent evidence indicates a few still survive in Montana. Research will, in time, determine its true status.

- The black-footed ferret has always been rare. Its range coincides with that of the prairie dog, on which it depends for survival. Prairie dog control programs have the secondary effect of seriously reducing ferret populations. Dog towns where ferrets occur must be protected if the black-footed ferret is to survive in Montana.

- The whooping crane visits Montana only while migrating between wintering areas on the Gulf Coast of Texas and its breeding grounds in the Mackenzie Territory of northwestern Canada.

Montana law calls for review and revision of this list by July 1, 1975, and every two years thereafter. The review process includes public involvement—allowing interested persons or groups to submit testimony concerning the status of various species. During the review process, other species of nongame wildlife may be added to the endangered species list. Before this can be done, however,

an inventory of “rare” species (which could be considered candidates for further classification) must be developed.

There will, no doubt, be many nongame species for which insufficient information exists to properly classify them. Determining their true status will receive a high priority. And the department's resource program will try to reduce the number of “status undetermined” species to zero—a necessity for establishment of management goals and priorities.

Implementation of Montana's “Nongame and Endangered Species Conservation Act” has provided the opportunity not only to sing a song for unsung wildlife, but also to prepare an entire symphony exemplifying nature's harmony. With development of a vigorous nongame and endangered species program, this goal will become reality. 🐾

(Since nongame and endangered wildlife have become such important topics of discussion recently, we plan to increase our coverage of this vital issue. Later this year, we'll run a series on Montana's endangered species. —Ed.)

wildlife shorts

Research in eastern Montana indicates that certain mouse species are indicators of the quality of strip mined land reclamation.

The Bull Mountains of eastern Montana do not contain any snowshoe hares.

The number of black-tailed prairie dog towns in eastern Montana may be increasing.

The 13-lined ground squirrel does not possess 13 lines or stripes. It has six light stripes and five dark stripes on its back; thus, it possesses eleven rather than thirteen stripes.

The common deer mouse is the most abundant mammal in Montana.

Research indicates that deer mice feed on large quantities of insects.

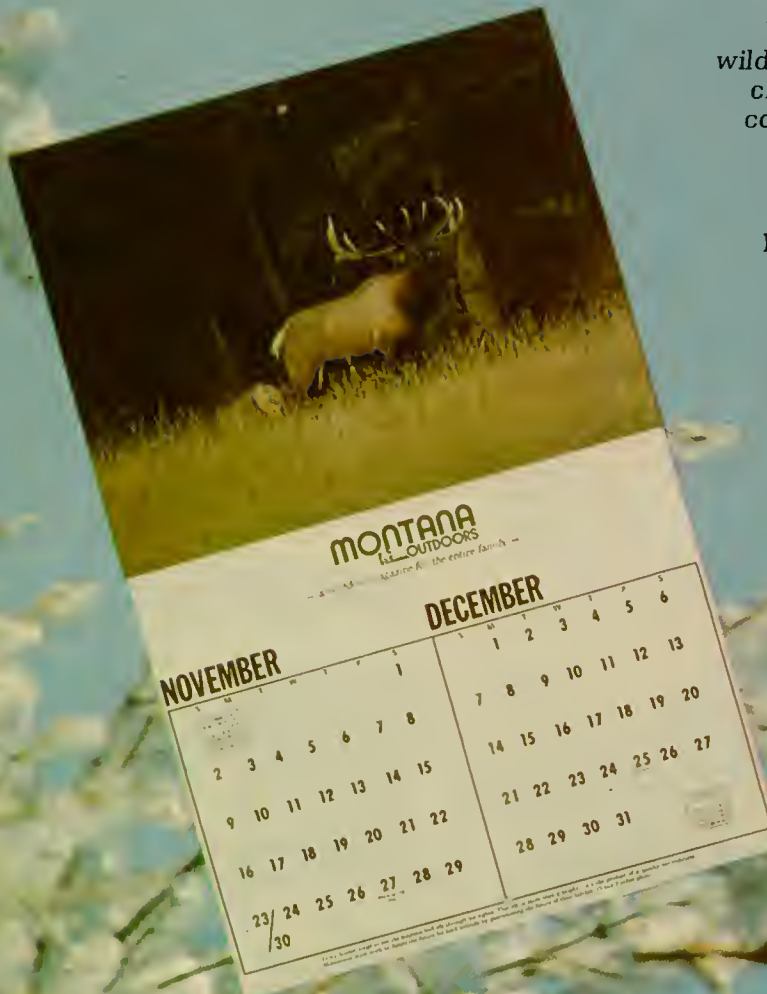
The eastern cottontail rabbit has expanded its range to include most of eastern Montana.

1975 MONTANA WILDLIFE CALENDAR

We still have a supply of **Montana Outdoors'** 1975 wildlife calendars available and this may be your last chance to receive one. When our present supply of calendars is gone, we will substitute our fish, game and wild plant cookbook, "Savoring the Wild."

The calendar is yours free with a new three-year subscription or three-year renewal order to **Montana Outdoors**. Each calendar contains seven of our best wildlife photographs in large (8½ x 11") ready-to-frame sizes and printed on high quality paper.

To get your subscription to **Montana Outdoors** and 1975 wildlife calendar, use the handy tear-out card.



the end of living and beginning of survival?

The following guest editorial is a summary of testimony presented by Gary Wicks, director of the Montana Department of Natural Resources and Conservation, at the Federal Energy Administration's hearings on "Project Independence." The hearings were conducted in Denver, Aug. 6-9, 1974.—ED.

When the [former] President stated in November 1973 that "By the end of this decade, we will have developed the potential to meet our energy needs without depending on any foreign sources," the general reaction was one of acclaim, for this goal appeared to be a solution to our balance of trade problems and an end to our vulnerability to political blackmail from abroad. Even more, it represented a return to the pride and patriotism that, in part, led to the success of the Apollo program.

Yet, today, we find ourselves no further ahead in resolving our energy problems than we were nine months ago, except that, through good fortune more than anything else, the crisis nature of the problem has been reduced for most Americans. But this is only temporary, as everyone here knows, and the really tough decisions lie ahead.

After finally receiving a hearing on Project Independence by 1980, after examining its implications for all segments of our society, and after witnessing countless redefinitions of its meaning until we have a meaningless definition, let us begin the hard decision making by unequivocally abandoning the goal of energy self-sufficiency by 1980.

As politically unpalatable as this might be, a brief discussion of the problems associated with

the attempt to achieve Project Independence should compel us to do nothing less.

First, and most obvious to everyone, is the impediment to self-sufficiency posed by the nation's limited resource base of petroleum and natural gas. As obvious as this is, we have seen that one objective of Independence is the increase in production of oil from the current level of 9 million barrels per day to 15.3 million barrels per day by 1990, in spite of declining production since 1970 and a suggestion by one expert that we will be out of oil completely by 1990.

Second, lead times for opening new oil wells and coal mines, establishing new conversion and nuclear plants extend well beyond 1980 and will be complicated by shortages in both materials like copper and steel and manufactured products as varied as roof bolts, hopper cars and explosives. Anyone who is aware of the difficulty of obtaining even used drill pipe should be able to envision the massive constraints in all areas of energy production should energy independence by 1980 continue as a national policy. Further limitations are imposed by the state of technology in such fields as geothermal, solar, oil shale, breeder reactor and fusion processes. Still another obstacle is the lack of qualified manpower. Commerce Secretary Frederick B. Dent has noted that "Manpower . . . problems can probably only be solved by a severe marshalling of resources."

The American economy would be, as is obvious, shaken by efforts undertaken in the name of Project Independence. The shift to Western coal mining, alone, would bring declines in capital investments, tax revenues, employment and secondary industries in both the East and Midwest. Massive federal expenditures, particularly to provide subsidies, price guarantees

continued

recycled paper

or other forms of insurance for synthetic fuels production, will be necessary. As much as \$700 billion in private capital would also be needed, which would result in increased competition among all prospective borrowers as well as upward pressures on interest rates. In order to encourage domestic supplies, price controls will probably be relaxed or eliminated, contributing further inflationary pressures and resulting in tremendous flows of capital from consumers to companies.

Because Project Independence may be interpreted abroad as, at best, isolationist, world trade in other commodities may suffer, and foreign alliances may be weakened.

Yet most important to me are the implications of Project Independence for states like Montana. Since the nation's most abundant fossil fuel is coal, and since Montana has strippable reserves of at least 43 billion tons of low sulphur coal and an apparent surplus of water, our state has become a focal point in the search for alternative sources of energy. But because Montana is a rural, agricultural and unspoiled state, the impacts of massive development would be of unparalleled severity.

Our easily strippable coal reserves underlie a million acres of land, and over one-half million acres have already been leased for this purpose. Coal-fired power generation capacity in Montana will have gone from almost zero a couple of years ago to approximately 2,500 megawatts by 1975 if all applications for facilities are approved. The National Petroleum Council has suggested that, under conditions of maximum development, Montana by 1985 may be the site of fourteen gasification plants, two liquefaction plants and seven 1,000 megawatt electrical generation plants.

Gov. Thomas L. Judge has articulated our fears in this way: "Total utilization of these resources through strip mining, generation and gasification plants and transmission facilities could lead to one of the largest industrial developments in the world. The land would be torn up. The skies could be poisoned with gaseous and particulate emissions. And the flow of our rivers would be dangerously depleted by industrial consumption. This specter of industrial wasteland is completely unacceptable to Montanans"

The consensus of Montanans, as reflected in our last three legislative sessions, is clearly that, if energy development is to proceed, it will do so only on our terms and under strict and rigidly enforced controls. Our state, and others which are threatened with environmental, social and economic upheavals, should not be forced into programs devised without so much as token consultation.

Yet that will be the result if the policy of Project Independence is pursued to its ultimate end. We

risk losing the authority and right to choose our own destiny. We can do nothing but resist this loss, and that is mainly why I am here today.

These obstacles at both the national and state level have led S. David Freeman, Ford Foundation's Energy Policy Project head and former White House energy policy chief, to term energy self-sufficiency by 1980 "completely unrealistic" and *Weekly Energy Report* to call it "a clear misrepresentation of the U.S. energy condition." "There is no way we can meet the self-sufficiency goals of Project Independence by [former] President Nixon's 1980 deadline, and probably not even by 1985," reacted Ralph Lapp, physicist, member of the World War II Manhattan Project and Washington-based energy consultant. ". . . It is evident that we might close that gap, which is the import gap, and bring the situation into self-sufficiency by the end of this century. I would point out that self-sufficiency by 1980 is a pipe dream, to put it bluntly . . .", commented Philip N. Ross, manager of Power Systems Planning for Westinghouse. Economist Sylvia Porter stated, "It is a cruelly, even dangerously deceptive belief for anyone to promote."

Apparently in mute agreement, many top administration officials, like Atomic Energy Commission (AEC) Chairman Dixy Lee Ray and Federal Energy Administration (FEA) Administrator John C. Sawhill, have begun backpedaling on the 1980 target date. The meaning of "self-sufficiency," once so clear, has now been obscured by former FEA officials William E. Simon and William Johnson, White House economist Herbert Stein and Interior Secretary Rogers Morton to denote a reduction rather than an elimination of imports and a reliance on so-called "friendly" suppliers. Secretary of State Henry Kissinger, too, has moved the goal from the absolute to the relative, terming Project Independence "a way station on the road to Project Interdependence." Indeed, the very definition has been drastically changed, by the FEA, into ". . . a wide ranging program to evaluate this growing dependence on foreign sources of energy, and to develop positive programs to reduce our vulnerability to future oil cut-offs and price increases."

Now if this means that we have recognized that the [former] President's goal is far more difficult and far less defensible than once supposed, and if we are at the point where reason replaces rhetoric, then Montana is willing to move ahead in structuring a Project Independence we can achieve and live with.

With that in mind, I would like to offer the following recommendations:

(1) Project Independence shows single-minded concentration on increasing domestic energy production. Part of a far superior solution, for

both the near and far terms, would be conservation, and a specific national conservation goal should be articulated.

According to the Joint Committee on Atomic Energy, in 1970 nearly half the energy of original sources is never put to use, and efficiencies are expected to decline. More research should be directed to improving efficiencies of conventional sources through the use of such technologies as the heat pump, arc heaters and templifiers.

But we must go further than that; once the technologies are developed, methods of insuring their implementation must be adopted, even if that requires subsidies or authority to mandate their use.

Figures compiled by officials of Continental Oil Company indicate that a 10% savings in total U.S. energy consumption would equal the production of 200,000 new oil wells, or 2,930 new coal mines, or 211 new nuclear plants. A 10% reduction in demand or savings in energy use should, it seems to me, be at least the minimum specific goal for this nation. Public education programs should be initiated in an effort to reduce demand, and broad studies of federal opportunities to enhance conservation should be made. We therefore recommend that conservation efforts, to include both decreasing demand and increasing efficiencies, be adequately funded at the federal level. The reaction to this kind of recommendation has been that we will lower the standard of living in this country. I wish to stress most emphatically that a changed standard of living does not necessarily mean a lowered standard of living, as the Ford Foundation Study suggests. Once we accept this, I believe we can proceed to try more innovative approaches than we have to date.

(2) The fuel mixes envisioned in Project Independence schemes show heavy proportions of oil, natural gas, coal and nuclear power, all of which involve serious problems.

Other promising sources have been de-emphasized; for instance, only 1% of the proposed Energy Research and Development Agency (ERDA) budget would be directed toward both geothermal and solar energy. Because exotic sources may be cleaner and available in almost infinite quantities, we recommend that research into utilization of solar, tidal and wind energy should be accelerated and better funded. The role of hydrocarbon fuels in our projected energy mix should be lessened substantially. In the meantime, we should be more careful about long-term commitments to a specific fuel. With technologies and the supply situation changing rapidly, flexibility should be designed into systems so that the transition from one fuel to another can be made with a minimum impact and dislocation.

(3) Crash programs in the name of Project Independence are neither wise nor necessary. Time to develop a rational internal energy policy can be gained through continued (if decreased) reliance on and stockpiling of foreign supplies.

(4) The insistence by industry on relaxation of environmental standards can only widen the gulf between environmental and business interests, resulting in further delays and numerous court tests. We recommend that industry acknowledge the legitimacy of such environmental standards as presently promulgated by the federal government and proceed only within the boundaries of their maintenance. In the long run, I believe this policy will reduce delays and move us far along from problems to solutions.

(5) States' rights to determine their own destiny must be preserved. While we welcome minimum federal standards, as they are in the national interest, we insist on the right to raise those standards should state and local interests dictate. Any national energy policy should have enough flexibility to take state needs and desires into consideration.

For instance, if Montana should adopt a policy of export only with regard to coal, then that decision, in my opinion, should be allowed to stand.

(6) Because international cooperation will be essential to meet such international challenges, we recommend that it be sought and encouraged.

(7) Finally, we can turn the past Arab oil embargo to our benefit, not through sequent attempts at energy self-sufficiency, but through a realization that the energy crisis was more than an isolated national issue. Instead, this problem was a manifestation of far more serious, global problems associated with unlimited material growth; this crisis was the precursor to a series of crises in metals and minerals; in water, forest products and land; in population and food.

We suddenly find ourselves at the point where (and I quote from a provocative book, "The Limits to Growth"), "... having reached unprecedented levels in both [demographic and economic growth], man is forced to take account of the limited dimensions of his planet and the ceilings to his presence and activity on it. For the first time, it has become vital to inquire into the cost of unrestricted material growth and to consider alternatives to its continuation."

Otherwise, we may find, as Chief Sealth [Seattle] stated over a hundred years ago, that we have reached "the end of living and beginning of survival." 🐻

Guest editorials published in Montana Outdoors do not necessarily reflect the opinions of the Montana Department of Fish and Game. — Ed.



Angler Urges Humane Killing Of Fish

I am embarrassed and ashamed that I have never seen mention of the sportsman's attitude concerning how a fish shall survive or die in any issue of *Montana Outdoors*.

It is my understanding that if the fish is to be returned to the water, the fisherman's hands should be wet with the water from which the fish was taken. This is so the protective slime of the fish is not eradicated or disturbed which does occur if hands are dry or gloves are used.

If the fish is to be kept, it should be killed immediately so it does not suffer the slow, agonizing death of suffocation. Explanation is unnecessary.

My observations prove that very few so-called sportsmen give any attention or concern to the manner in which a fish dies. (Beside that, I'll lay you odds ten to one that they are against capital punishment.)

May the poor suckers (all species) meet with a quick and honorable death.—*Scotty Prescott; White Sulphur Springs, Mont.*

• Because of limited factual information, department publications have hardly discussed methods of releasing hooked fish. Some people suggest, as did Mr. Prescott, that before removing the hook, a fisherman should wet his hands. This minimizes disturbance to the slime covering which protects fish against parasites and diseases. The other school of thought contends that damage to the fish's internal organs from grasping it tightly is more critical than loss of slime; therefore, dry hands are preferred since less pressure is required.

Another enigma: It is considered less sportsmanlike to "horse" fish in than to "play" them on light tackle including a fine tippet. Yet, fish sometimes die after severe muscular activity. Death is apparently due to accumulation of lactic acid in the blood. When a certain level is reached, a fish cannot survive. This condition is not always obvious and a fish may die two to three hours after exercise.

To release fish with minimum damage, gear should be at least heavy enough so they can be brought in promptly. Hooks should be removed while fish are underwater, with as little handling as possible. Of course, barbless hooks are best because

fish can often be shaken free. If a hook cannot be easily removed, cut the leader. Apparently, many a fish survives with a hook left in it.

We agree with Mr. Prescott that fish caught and kept should be killed promptly and humanely. The following is from the section on field care of fish from the Montana Outdoors fish, game and wild plant cookbook, "Savoring the Wild":

"Once caught, fish should either be killed promptly or kept healthy. Quality deteriorates if they die slowly. (Then too, it is more humane to kill them quickly.) Killing can be easily accomplished by thrusting a knife point between the eyes into the brain or by a sharp blow on the head.

"When lake fishing, fish may be kept alive in a cage in shallow water or on a stringer. But if the surface water is warm, the time should be short and deeply hooked fish should be killed promptly. A safety pin stringer is the best type to use, with the fish pinned through the thin membrane just behind the lower lip. It can still open and close its mouth and if you decide to let it go, it will be practically unharmed. Do not string a fish through the mouth and out the gills because this will damage the gills and cause slow death. If you are using a boat, be sure to pull the fish out of the water when going at high speeds to keep them from drowning."

The Department of Fish and Game endorses a policy of harvesting surplus animals and promotes sportsmanship.

In nature, death is as necessary as life, for death makes possible recycling, renewal and evolutionary progress. Plants and animals are extravagantly overproduced, particularly fish. For example, a 2-pound female rainbow trout lays 2,500 eggs per year. In most waters, even those that are unfished, less than one per cent of the hatched fish live to spawn. This means an angler who removes fish is allowing others to live, except in waters where the normal fish population has been severely reduced.—George Holton

WHAT WILL BE LEFT IN '76?

Recently, several "second home resort communities" in our own Smoky Moun-

tains area have gone bankrupt. I hope something similar happens in Montana and that some compensation for the damage can be made. I just keep thinking to myself, "Don't Californicate Montana." I am sure my father feels the same way, because when he was city manager in California, he was almost fired because he disagreed with a developer.

I see it like this: Sure, I'd love to own a home in the country with my own private fishing stream rushing down from the mountains in the front yard and deer peeking out of the forest in the backyard. But for every family who owns a home and land like this, there are many more who are denied the use and enjoyment of the land. I would rather live in the city and share the land with others and with the wildlife so the land is preserved and protected for the future. We all must enjoy the wilderness and leave it in the same state for future generations to enjoy as we do instead of "enjoying" it and using it up in less than a lifetime.

I will start college in fall 1976 and Montana State is one of my top choices. If I do attend MSU, I hope to find some of Montana left when I get there.—*Jim Arnold; Knoxville, Tenn.*

PICTURES PRAISED

I just renewed my subscription to *Montana Outdoors* and wanted to congratulate you on a fine magazine.

The pictures in the Sept./Oct. 1974 issue were the most beautiful I have ever seen.

Keep up the good work!—*Don Whiteman; Burney, Calif.*

FISHING LINE ENTANGLES FOWL

I have had two experiences with monofilament fishing line since last fall that deserve comment.

I shot a goose which had become so entangled in monofilament line that one leg was practically cut off at the knee joint, although the goose appeared to be in good shape and was in flight. I saw a seagull that was next to dead because it was completely entangled in fishing line—legs, wings—and it also had a hook in its mouth. We released it and I believe it survived.

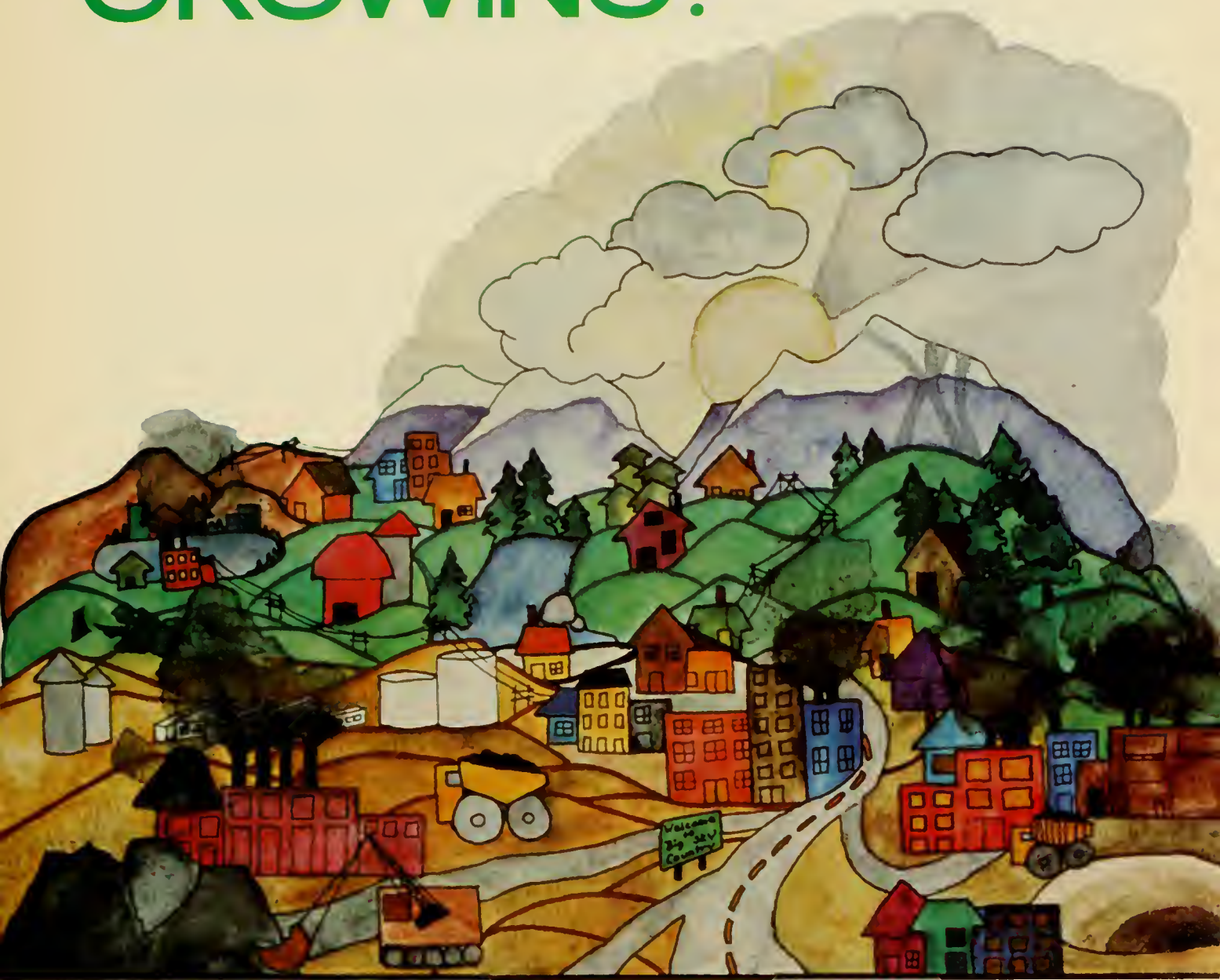
I'm sure there are many more such accidents caused by leaving fishing line scattered on river banks or tossing it in the water.—*Joe F. Hansford; Bozeman, Mont.*

EDITOR ENJOYS ARTICLES

As the editor of an outdoor column, I enjoy reading your many fine articles. The Sept./Oct. 1974 issue was outstanding.

Permit me to compliment the editorship of your informative, educational and interesting wildlife conservation and natural resources publication.—*G. Edward (Gus) Budde, editor, Lewis and Clark Trail Newsletter*

WHERE IS MONTANA GROWING?



A Montana Outdoors special report



A LOOK BACK: The land gave, and the land suffered. The people plundered, and the people suffered.

by Tina Torgrimson

It is no accident that Montana is known as the Treasure State. Or that the state motto is "silver and gold" and the Capitol's dome is sheathed with copper. For the history of Montana is a tale deeply rooted in the wealth of the land.

When Lewis and Clark saw Montana in 1805, they described an awesome land, both beautiful and terrible—semi-arid prairies and lush plains covered with a sea of grasses, rich river valleys and craggy mountains blanketed by thick forests, rolling foothills and lonely buttes, and thousands upon thousands of buffalo, beaver, antelope, deer. It was a huge and hushed land of searing sun and wind, of chinook riding on the back of a blizzard. And infinite wealth, wealth that whispered of the future.

Their description decisively opened the floodgate for development. Trapper, miner, cattleman, homesteader—they all flocked to Montana to win their fortunes in the new frontier. From the beginning of the white man's incursion into the West, the promise of a profitable new life was the lure.

The history of Montana has been romanticized almost beyond recognition. We like to remember cowboy artist Charlie Russell (Michelangelo of the West) and shoot-'em-up cattle and mining days, steadfast pioneers triumphing over the perils of the wilderness, cowboys, Indians and cavalry.

The West's romantic history has not only enthralled Montanans but has thrilled all of America. We don't like to listen to the real story—how a brave and proud people were herded off to reservations by white men who coveted their fertile lands; how money-hungry cattlemen finally lost out

to overgrazing and weather because they misunderstood and disrespected the land; how one Company and a few men controlled the state—from worker to governor—because the Company owned the land's richest minerals, how tens of thousands of homesteaders who wanted the land to perform miracles fled the state as countless acres of earth, upturned and dry, blew away.

True, not everyone came to Montana to reap profits from the land. Some wanted space; some sought a simple way of life; some respected the land. They lived quietly and left soft marks on the land. But it was the scores of profiteers, entrepreneurs and spoilers who left the ugly scars that still endure.

When we look at Montana's face today, we wonder why Bannack is lifeless, why the hillsides around the Anaconda smelter are barren, why a race of people dwells in open-air ghettos, why deserted towns and empty shacks dot the plains landscape.

We must stare at our Montana legacy—and most of it is not so pleasant to see. But we have to understand the grim reminders of exploitation, expansion, boom and bust to know where we are now and how to proceed in the future.

A COLONIAL ECONOMY

Montana was destined by nature to become a colonial economy. Man has trapped, fought, reaped, mined, lumbered and left. And for every major development, money came from the East and products returned to the East. Montana lost not only her treasures but most of the wealth they generated.

Now, Montana again is on the brink of massive development and industrialization. The boom and bust cycle is rearing its ugly head on the horizon. The world's largest energy conglomerates are hungry for eastern Montana coal and the nation's mobile populace is chewing up precious agricultural land for subdivisions. Montana again is threatened to become a subject colony to the rest of America.

Some will sneer, maintaining this is an environmentalist's distorted view, and go on with business as usual. But the abuse of land and what that abuse has done to people is a fundamental historical fact in Montana. We have relentlessly asked the land to do what it could not do—and we and everything around us have suffered miserably as a result. We have not bothered to understand the land because we have been too busy living our lives or trying to make money from the land. We have ruthlessly and unwittingly blighted our fundamental resource. Our future and the future of our descendants lies in the land beneath us.

After a century and a half of largely undirected, uncontrolled development, we have little time left for mistakes. We have never had a set policy about the use of land, only an unwritten license for exploitation and abuse. Yes, we still have valuable resources and precious space, but they are limited and they are becoming more in demand every day.

HISTORICAL PERSPECTIVE

America was ripe—land, minerals, raw goods. It was the Great Frontier, a wonderful gift to western Europe. And the method devised for developing it was one of blatant exploitation—monetary worth over human and natural values, a pattern that would become the driving, implacable force of the future. And so out of America's plenty, the economic system of capitalism mushroomed.

In the West, it was all there waiting—enormous wealth, limitless land, mighty rivers, infinite things that spoke of progress and profit.

Beginning with the Louisiana Purchase in 1803 and the Lewis and Clark expedition in 1804-1806, the West was opened. By 1900 the northern frontier was gone. In 37 years (1806-1843), fur trading had grown and died. In 20 years (1860-1880), the Indian was subdued and contained. In 21 years (1866-1887), the open range cattle industry boomed and busted. From 1870-1900, Montana's population exploded from 39,000 to 243,000. By 1899, the Treasure State was in the clutches of the Anaconda Copper Co., producing 60% of U.S. copper and 23% of world copper. Gold and silver mining had exploded but ebbed and the homesteader soon was to flock into and flood out of eastern Montana. Between 1909 and 1925, 80,000 came and 60,000 left.

The foundations for Montana history were brief and bizarre and they set furrowed patterns for the future. These seminal beginnings—the Indian, fur trading, cattle herding, mining and home-

steading—and their rise and fall all provide overwhelming insight into the roots of Montana.

For beneath and essential to all was the land. The land and the events were interdependent—they profoundly influenced each other. The land gave and the land suffered. The people plundered and the people suffered. Each boom and each bust sheds

"The earth was created by the assistance of the sun, and it should be left as it was The country was made without lines of demarcation, and it is no man's business to divide it I see the whites all over the country gaining wealth, and see their desire to give us lands which are worthless The earth and myself are of one mind. The measure of our bodies are the same." —Chief Joseph of the Nez Perce

light on how attitudes about the use of land continually damaged and often destroyed the lives of Montanans and the land upon which they depended.

The native Americans knew that life was equated with the earth and its resources. With understanding and respect for the world around them, they developed a life of harmony, a holy relationship with the earth.

They roamed for their livelihood and followed the buffalo wherever it went. True conservationists, they cautiously used the land's animals and plants for survival. Animals were not just killed for meat; their hides, bones, even skulls and horns had many uses. Plants were food, implements, medicines, beverages, poisons. Land was not property; it was life. Everything was respected for its life-giving qualities, and from this respect developed a remarkable culture and religion.

But their life was an obstacle to the newcomers—the trapper who wantonly killed the beaver, the cattleman who overgrazed the land, the hunter who annihilated the buffalo, the miner who lusted for gold in the hills, the homesteader who plowed the plains—who saw the land as property to be owned and wealth to be taken. This white man's concept of property was completely alien to these nomadic people.

Rotting buffalo carcasses, sod "wrong side up," game without a home—all were foul images to a people who held a partnership with nature. All were images that finally forced them to strike back at their disrespectful invaders. And in return they were overcome and restrained on reservations.

The extermination of the buffalo, combined with the dread smallpox carried by the white man, dwindled the power of the Indians. By 1868 there was war on the frontier between the whites and the Indians. By 1880 most of the Indians were confined

continued on page 15

where is the eagle?



F&G photo by Ken Slater

"The Great Chief in Washington sends word that he wishes to buy our land. How can you buy or sell the sky—the warmth of the land? The idea is strange to us. Yet we do not own the freshness of the air or the sparkle of the water. How can you buy them from us? Every part of this earth is sacred to my people. Every shiny pine needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy in the memory and experience of my people.

"We know that white man does not understand our ways. One portion of the land is the same to him as the next, for he is a stranger who comes in the night and takes from the land whatever he needs. The earth is not his brother but his enemy, and when he has conquered it he moves on. He leaves his father's graves and his children's birthright is forgotten.

"There is no quiet place in the white man's cities. No place to hear the leaves of spring or the rustle of insect wings. But perhaps because I am savage and do not understand—the clatter only seems to insult the ears. And what is there to life if a man cannot hear the lovely cry of the whippoorwill or the arguments of the frog around the pond at night.

"The whites too, shall pass—perhaps sooner than other tribes. Continue to contaminate your bed and you will one night suffocate in your own waste. When the buffalo are all slaughtered, the wild horses all tamed, the secret corners of the forest heavy with the scent of many men, and the view of the ripe hills blotted by talking wires. Where is the thicket? Gone. Where is the eagle? Gone. And what is it to say goodbye to the swift and the hunt, the end of living and beginning of survival."

Chief Sealth [Seattle] of the Duwanish Tribe in Washington wrote these words in a letter sent to President Franklin Pierce in 1855

on reservations. In two decades, a culture and civilization at peace with the earth was destroyed by a culture at war with the earth.

FUR TRADING

It is revealing that Montana's first economic development was the consequence of fashion whims a continent away. Fur was vital to fashion in Europe and when Lewis and Clark established that the West was a treasury of beaver, the onslaught was on. From 1806-1843 trappers scoured Montana—crossing, recrossing, mapping.

When fashion changed, the textile industry grew, the beaver populations dwindled and the fur trading business ebbed. The initial discovery and development of Montana resulted. And that brought problems—the dwindling of the supply of fur-bearing animals, and smallpox, liquor and Christianity to the Indians.

Fur trading also established a land use pattern that was to become alarmingly cyclical—the spoilation and depletion of the land and its resources for personal fortune. The traders took the beaver, and when it was no longer plentiful or profitable, they left.

THE OPEN RANGE

When the Texas Trail Drive rolled into Montana in 1866, eastern Montana entered the economic setting. The cattlemen of the open range were the first to utilize the vast, semi-arid plains. In many ways their use of the land could have been the best, if they had not pushed the land's capabilities too far.

They had moved north to Montana because the southern ranges were worn out and farmers and miners in western Montana needed meat. Water in the south was scarce; the heat was suffocating, pests and disease were rampant. Eastern Montana was an endless sea of grasses that looked like it could graze all the cattle of the world, as well as provide an endless source of wealth. In addition, there was no provision on the plains for the selling and leasing of land. So the cattle barons took it. They fought with the Indians and they fought with each other for it.

Raising cattle on the plains looked like a quick, easy way of making money, and the ranges filled up rapidly, until they were dangerously overstocked. By 1883, the U.S. Department of Agriculture estimated that about 600,000 cattle grazed in Montana. Much of the industry was based on absentee ownership. The cattlemen built up a lucrative enterprise that attracted eastern and foreign capital and stimulated the railroads to come to the West to deliver meat to the East. The booming cattle industry enriched stockmen who never laid eyes on Montana.

But the thriving businessmen were fatally ignorant of the unpredictability of Montana weather. They had based their industry on grass, weather and good luck. And luck gave out with the weather and a

resultant shortage of grass. In six years—intense years of drought and grasshoppers, hail and wind, blizzard and chinook—the whole kingdom came tumbling down.

The winter of 1886-1887 dealt the death blow to the mammoth industry. Preceded by a period of conditions that culminated in a very thin grass cover, the terrible winter began with heavy snow, melt, then freezing cold and bitter wind, followed by another severe storm. By the time a March chinook showed up, thousands of putrid carcasses covered

"Montana has lived the life of America, on a reduced scale and at breakneck speed." —Joseph Kinsey Howard, *"Montana—High, Wide and Handsome"*

the plains. It is estimated that 70% of the cattle starved or froze that winter, resulting in a total loss of around \$20 million.

It could have been a profitable lesson to those who would follow their fortunes in Montana. But the cycle continued.

THE MINING INDUSTRY

From 1880-1900, Montana went from frontier to booming industrial economy, but not without tremendous drawbacks. An era dawned in Montana when the state's workers as well as the political process were literally dominated by the copper industry.

The industry wielded enough power to control the legislature, elect a territorial Congressional delegate and a U.S. senator, own the press and pull off a shutdown that stopped the state. Indeed Montana was a kingdom ruled by copper magnates.

Mining first came to Montana in the early 1800s. The first big strike was gold on Grasshopper Creek in 1862. Discovery after discovery followed.

Mining brought more settlement to the state, particularly farming and ranching in the mountain valleys. In turn, miners opened wagon roads by which countless other people conducting a variety of business were to come seeking success.

In 1880 Marcus Daly bought the Anaconda silver mine for \$30,000. It turned out to be the birth of the Anaconda Mining Co. and the mighty copper development that followed. It was soon discovered that the Anaconda was not only a silver mine, but an extremely rich copper mine. Consequently, the world's largest copper smelter was erected in 1884 at the town of Anaconda, 28 miles west of the mine.

In the 1880s, Montana yielded its greatest population increase—265%—because mines (copper, silver, gold) were lavishly producing. During this time the lumber industry also grew swiftly, producing fuel for the smelters and timber for the mines.

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Mining turned out to be another extractive industry, perhaps the stongest example of Montana's colonization. By 1890 non-Montanans owned the largest blocks of stock in almost every significant mining enterprise.

As copper mining tore wealth from the richest hill on earth, it also wrested power from the people of Montana. The war between Montana's two copper kings—Marcus Daly and William A. Clark—began in 1888 and raged until Daly died in 1900. The stakes were control of the state and its political process. Their feud included selection of a territorial delegate to Congress, in which Clark was defeated; a fight about the choice of Montana's capital, which Clark won, and the struggle when Clark persevered to become a U.S. senator—a battle that included buying votes in the Montana Legislature (to the tune of \$1 million) and an investigation by the U.S. Senate.

Before Daly died, he sold the Anaconda Co. to Standard Oil, which ushered in an even more turbulent era in Montana history. Shutdowns and bloody labor fights were the order of the time. Once, the legislature was even summoned to pass a bill the Company wanted.

One resource made two powerful men who brought Montana and her citizens to their knees. The economy and every facet of Montana life—legislation, courts, workers—were in the copper industry's clutches.

THE HOMESTEAD MOVEMENT

The tragedy of the open range should still have been fresh in Montana's memory by the turn of the century, but it was not.

Between 1900-1925, a boom and bust hit eastern Montana unlike any before or since. Past mistakes were forgotten; the land and its characteristics were ignored. Development came too fast, too soon. And both the land and the people inevitably suffered miserably for it.

The promise of dry-land farming on the plains brought swarms of people to eastern and central Montana. Free land and tales of its riches enticed these people, most of them from the Midwest. The magnetic combination of new dry-land farming techniques, the 1909 and 1912 Homestead acts, a mighty promotional campaign, easy credit, high land prices elsewhere and war-induced soaring wheat prices created the biggest land boom and bust this country has ever seen.

By 1909 over a million acres were homesteaded and over 250,000 acres planted in wheat. From 1910-1922, 42% of the entire state, 93 million acres, went to homesteaders. By 1919, 35 million acres were planted in wheat. Nearly 80,000 people flooded into central and eastern Montana from 1909-1918.

An incredible promotional campaign was waged on all fronts—federal and state government, railroads, merchants, grain industry, chambers of commerce, bankers, local residents. All joined forces

to entice new economic prosperity to Montana. Their campaign went all over the country, particularly the Midwest. And their pamphlets often misrepresented the soil, rainfall, temperatures and cost of living.

Midwesterners and other humid-area people who came did not understand this arid country, where even shelter, water and fuel could be a struggle to obtain. Their farming practices were inadequate for the soil and weather on the plains.

So they plowed and they planted, and for awhile they prospered—until wheat prices dropped and the weather brought its inevitable drought cycle again.

June 1919 was the driest month on record and in 1920 the winds came. They had come many times before, but this time there was no grass to hold the soil. It had been plowed under for the new cash crop, wheat. The drought worsened in 1921 and the forces of fire and wind, dust and grasshopper united to make a living hell out of the northern plains.

Between 1919 and 1925, nearly 60,000 people went broke and fled Montana. Some 11,000 farms blew away or were eaten up. And when the people left, other things suffered too. During the boom 23 new counties had been formed, based on the new population and the enlarged tax base. Without either, county administration costs skyrocketed. Between 1914 and 1922, costs rose 149%.

During the boom, banks literally sprang up overnight all over the plains. And they lent lavishly. Too lavishly. When things got tough, more banks failed than Montana has now. And when people left, they left their vacant shacks and stark towns behind them—skeletal reminders of a bankrupt boom, mute offerings to endless dust and the broiling sun.

These people learned a hard lesson that land cannot be abused without consequence. They had failed to question whether Montana could support this massive influx that depended on the land and changed the whole structure of Montana's population.

CONCLUSION

"Montana's miseries have sprung from the land," says Montana historian K. Ross Toole. Our history teaches us that our failure to understand the land and respectfully treat it as a life-sustaining resource has resulted in tragedy after tragedy.

The early history of boom-and-bust Montana is a classic example of the perennial battle of private property versus public good, short-term profits versus long-term use. And in one example after another, Montana history teaches that the supremacy of private property and short-term profits has in the end destroyed not only that private property and its profits, but deeply wounded the people as well.

It is time—past time—that we listen to the land. That we see it as a resource. That we understand that it gives us life. For we are as surely destroying ourselves as we are destroying the land.

We cannot forget the thousands of lives perman-

ently injured by poverty, the destruction of a culture, the waste of thousands of tons of food, the terrible death of thousands of livestock, the millions of acres of soil gone. And we must remember that this is our heritage—this has been a vital influence in making us what we are today, as well as a crucial insight into our present problems. We don't need to talk here of those who didn't abuse the land. They have done fine. But unfortunately they have also been few and their effects have been small.

The cycles that rampaged through Montana history were not unique to Montana. They happened in comparable ways in the East, in the South, in the Midwest and in the West. And for much of America they raged to the point where it is almost too late to recover.

Montana must keep in mind that even when other resources are depleted, space and beauty—priceless values in this state—will become the new commodity, the fuel for the new boom.

Montana still has vast resources, notably coal. The boom and bust Montana faces on its coal-bearing lands must be viewed in light of past patterns. Grim patterns of resource depletion and an economy controlled by one resource and outside capital. Empty towns after the bust and county costs when the people are gone. Topsoil, practically irreplaceable, blowing over the horizon. For those who believe in reclamation after the coal is stripped, remember the plowing of the plains—and then the searing sun and the dry skies, the prairie fires, the grasshoppers. And the wind.

For those who foresee the new land boom coming to Montana—subdivisions, second-home development, recreation—think again of poor counties and costs of government services, think of farmland turned into sterile lawns and septic tanks. Remember blue ribbon trout streams, the sweet smell of beargrass, the limitless blue sky, the hush of a quiet mountainside. Then see power lines, highways, dusty gravel roads.

To accept and understand the awesome significance of our Montana past, we must be ready and willing to destroy our myth about the West. We must acknowledge that we have both exploiter and exploited, and will continue to be until we recognize that and stop. We must realize that our myth will end up destroying even the Montana we romanticize.

Once we annihilate that myth, we must base our future on our past mistakes and transcend them. We must plan. It's not simple. It means taking responsibility. It means thinking. It means consideration and cooperation between people. It means taking power into our own hands and designing Montana's future, the way we want it to be—the way our descendants can enjoy it.

It is past time we see beyond the buck in our pockets today and think about our neighbors and our children and our descendants 100 years from now. To do that, we have to remember where our food and water—our life—come from. And respect the land. 🐾

DEFINING GROWTH: It isn't that easy.

If someone offered you a choice between (1) \$16,000 and (2) \$1 doubled 15 times [\$1 to \$2 to \$4 to \$8, etc.], which would you accept?

If you stopped to figure it out, you took the second offer. But if you chose the obvious, #1, you came up short—\$16,768 short, to be exact.

Actually, there are two kinds of growth:

- *Linear*—If you saved \$1,000 and then added another \$1,000 for the next 15 years, your nest egg would total \$16,000. Your money grew *linearly*.

- *Exponential*—If you had \$1 and it doubled once a year for 15 years, your savings would come to \$32,768. Your money grew *exponentially*.

One more riddle: There was once a clever Persian, or so the legend goes, who made a very rewarding deal using this concept. He offered his king a valuable chess set if the king would give him one grain of rice for the first square on the chessboard and then double it (to two grains) on the second square and keep on doubling (four grains on the third square, etc.) until the 64th square was reached. Thinking he had met one of his least intelligent subjects, the king readily accepted and ordered the rice brought from his storehouse. However, long *before* the 64th square was reached, the king's stores were completely exhausted. The subject's larder grew exponentially, leaving the king riceless.

Since 1970, Montana's population has grown from 694,000 to 735,000, according to Bureau of Census estimates. A few local areas such as Colstrip and the Gallatin Canyon may be experiencing exponential growth. On a statewide basis, however, Montana's present growth trend is closer to linear. But what does the future hold? We don't know.

Exponential growth can be dramatic even though it doesn't double *each year*, as it did in the first riddle. For example, Montana's population will double in 48 years *if* present growth (1970-1974) continues at the same rate. However, population growth could easily pick up which would bring an earlier doubling time.

This concept becomes even more dramatic with energy growth. From 1960-1970, Montana's consumption of all fossil fuels increased 2¾% per year, according to figures compiled by the Northern Great Plains Resource Program. Using 2¾% annual increase, Montana's energy growth will double in approximately 25 years. Again, we don't know what this growth rate will be in the near future, so the consumption rate could double before 25 years.

All this points out the evasiveness of growth. It can be more serious than it seems at first glance. 🐾



GROWTH: Benign or malignant?

by Bill Cunningham

The local planning board meeting was typical. The basic question of the effect of economic and population growth on living quality had been avoided most of the evening. But then, someone dared to question growth.

After a moment of awkward silence, the planning board chairman, a prominent local businessman, praised economic growth. "Growth," he said, "is desirable, it is a positive force for good."

Another board member agreed. "Too often opposition to particular developments is based on the unsupportable notion that growth in Montana can be stopped, progress halted or the future denied," he remarked.

Now, the climate was set for the standard Chamber of Commerce argument. And, sure enough, a local chamber member obliged. "It would be immoral to deny further growth," he said. "Families are growing. Businesses are expanding. Our community is building new homes. Too many of our young people have had to leave Montana to seek employment elsewhere."

The staff planner, a well-dressed young man imported from a more populous region, reinforced this ongoing consensus. "Our area is finally beginning to grow," he added. "Growth is inevitable. With sound planning, we can accommodate economic growth and still maintain and even enhance environmental quality."

A land developer, anxiously awaiting planning board approval of his rural subdivision, found his cue. "Only a development of substantial size," he said, "can achieve environmental quality. With the size and financial stability of my development, I can afford to provide greenbelts, self-contained recreational facilities and to maintain wildlife habitat."

That's right!" agreed a woman in the audience. "It isn't growth that needs to be stopped; it's piecemeal development occurring without good planning that creates all of our problems."

As I listened, I kept asking myself the same questions. Is growth inevitable? Has blind acceptance of the "growth is good" philosophy already decided Montana's future? What about the "good" planning argument? Is "mitigation of adverse effects," to use a popular planning platitude, an adequate remedy for our growth problems? Or, are we being mitigated into oblivion as we attempt to apply "good planning" cosmetics to incompatible developments? Is continued growth really compatible with maintaining Montana as we currently know it?

Are there no real choices for the future? Must we simply sit back and forever accommodate and mitigate the voracious appetite of the "inevitable" growth machine?

These questions don't have easy answers. Nevertheless, they must be actively debated at every opportunity. No longer can we blindly accept assurances that growth improves our standard of living.

But what is growth—this concept about which seemingly rational people differ so markedly? Growth is the expansion of human activity, technological development and consumption. Today, this expansion places unprecedented pressure on Montana's resources, environmental systems and life styles.

Increases in Montana's population exceeding one-half million have been projected from energy development alone. This level of development is expected to require 2.6 million acre feet of water annually by the year 2002, according to Bureau of Reclamation figures. However, the Northern Plains Resource Council reports applications in the past two years for water in the Yellowstone Basin already exceed 3 million acre feet per year. Although supported by some energy companies, a "marriage"

The views expressed in this article are the author's and do not necessarily reflect the opinions of the Department of Fish and Game. — Ed.

between industry and agriculture cannot occur in Montana. There are simply too many mutually exclusive demands for our land and water.

With excessive development, Montanans can expect climatic changes, elimination of plant and animal species and introduction of toxic substances into natural systems. These impacts are largely caused by material growth—the rate at which we push materials through our environment. To me, this implies that material growth must be limited if human and other forms of life are to survive.

The growth ethic is founded on technological optimism—the belief we will never run out of resources. Instead of running short, the theory goes, some technological genie will always find new resources to exploit or ways to use the present supply more efficiently.

Even if the optimists are right, can human ingenuity expand—or even maintain—personal freedom and dignity in the face of increasing demand for resources? Regardless of whether we blindly crash into physical limits or blindly rely on technology to save us, the net effect will be the same. The complexity and instability caused by growth require increasingly tight controls on human behavior to avoid disaster.

Those with the greatest vested interest in continued environmental abuse yell “Big Brother” the loudest upon hearing talk of governmental action to protect the public’s interests. And yet, unrestrained growth continues to widen the gap between the vested interests and the impoverished, creating even greater social inequities.

Technology may delay it, but the end result is greater control in a planned society. And those who claim that more consumption is vital to our American way of life actually encourage this.

Sadly, those with the most to lose are often sucked into the pro-growth camp by threats of unemployment allegedly caused by “radical environmentalists.” In truth, the real threats to their economic well-being come from the inflation inducing effects of growth, job obsolescence created by our plastic, mass production technology and an inequitable distribution of wealth and power.

TECHNICAL SOLUTIONS

Can technology solve growth problems? Planners characteristically deal with the costs of growth without sacrificing any of its alleged benefits. Computerized data banks, color-coded maps, resource inventories and land use regulations neatly packaged in a “comprehensive” plan become solutions.

Whether limits to growth are physical or determined by social values or both, will these or any other “solutions” allow us to grow and still retain Montana’s uniqueness and diversity? No.

Rhetoric about good planning cannot reverse the mathematical impossibility of simultaneously maxi-

mizing the opposing goals of material growth and environmental quality. Progress toward solutions will come only after we recognize that each increment of growth brings about a corresponding loss of natural and social values that cannot be “mitigated.”

How does one mitigate, for example, a totally incompatible second-home condominium development on an elk winter range? And in the long run, how do we mitigate the cumulative and interrelated impacts of more roads, strip mines, subdivisions, Winnebagos, power lines and people?

The panacea of “good” planning has lulled too many into a sense of complacency. Even worse is the insidious incrementalism of growth.

First come survey lines, invisible on the landscape. Then, a residence appears on what used to be good farmland. But after all, what difference will that single residence make? Then, another appears and another and another, until finally, the type and intensity of land use drastically changes. At this stage, the attitudes of local residents swing one of two ways: They resign themselves to these changes. Or, they try to adjust by convincing themselves that everything is all right.

Besides complacency, resignation and ignorance, we’re locked into a system compelling each of us to pursue our own best interests. For example, take a person desiring to build a lakefront cabin on an otherwise unblemished shoreline.

Since the individual receives all of the benefits of the second home, the positive factor is +1. The negative factor includes external costs, such as visual and water pollution, created by one more building near the lake. Society shares these effects so the negative cost to this person is only a small fraction of -1. Furthermore, the individual justifies his action by thinking if he doesn’t build, someone else will anyway.

Thus, the rational decision maker elects to build on what may be an inappropriate site from the standpoint of wildlife or other public values. Soon, other lakeshore owners reach the same conclusion. This continues until they collectively destroy the very values that initially attracted them. Therein lies the tragedy. Each individual attempts to increase his personal gain without limit—in a world (or in this example, a lake) that *is* limited.

Garrett Hardin, in his classic essay, “The Tragedy of the Commons,” developed his theme around a common pasture open to all. Each herdsman continues to add to his herd since he receives all of the proceeds from the sale of the additional animals. At the same time, he shares the bad effects of overgrazing the commons with other herdsmen.

Just as a pasture or lake can be viewed as a commons, so can the earth’s resources. Each of us functions as an individual “herdsman” as we impose greater stress on the finite carrying capacity of our commonly shared “pasture”—or planet, state, region, lake, etc.

continued



NERO FIDDLES AS ROME BURNS

The earth is a vast pasture which can supply a continuous—although limited—flow of natural and social values. When we abuse the productive base for these values—the resources—we exceed the carrying capacity. For example, a person may purchase a Winnebago to transport his family of eight to a second home located in what used to be a natural area. Only his personal benefits are perceived. The fact that he is consuming more than his share of the resources on which we all depend may never enter his mind.

As human influence becomes more awesome (through growth), more resources once regarded by society as private, become publicly regulated out of necessity. Already, some parts of the “commons”—air, water and wildlife, etc.—are legally regarded as public property. However, land—the key link between all elements of life—remains free to exploitation. As such, Montana land is wide open to the haphazard effects of thousands of independent, short-run benefit seekers.

More and more people are being reduced to a mechanical existence with the energy-intensive life styles caused by material growth. This leads to insensitivity to the quiet subtleties of the natural world. The outlet for tension becomes a snowmobile rather than a pair of cross-country skis gliding silently through untracked snow. Growth is thus phasing out a basic freedom to respect oneself—the feeling that we can survive in the natural world not as an adversary, but as a part of nature.

When a landowner maintains, “I can do what I damn well please with my land,” he’s condoning *any* land use that will increase growth. What the landowner is really saying is that he has a right to use his land in a way that will ultimately restrict everyone’s personal freedom, including his own. So, overuse of the commons brings ruin to all.

Every new restriction on overuse of the commons involves a decrease in somebody’s personal liberty. Cries of “rights” and “freedom” ring out. But what



MONTANA PLANS AS THE STATE GROWS

is freedom? Are we becoming more free as we increase our dependency on a technology which temporarily insulates us from the natural world? Perhaps the only way we can preserve more precious freedoms such as open space and solitude, is by mutually agreeing to give up harmful growth-inducing activities—rural subdivision, four-lane freeways, etc.

A MONTANA PERSPECTIVE

The eminent Montana historian, K. Ross Toole, eloquently describes what Montana is all about: Its [Montana’s] long-range wealth lies in the fact that Montana has in great abundance several precious commodities of which America is swiftly running out,” Toole writes. “It begins with space and elbow room. It ends with the *quality* of that space From the wind-bent grasses and the great clear rivers of the plains to the tumultuous mountains and the wild forests, rivers and lakes of the west, Montana is one of America’s last links with its real heritage—the land—the land unspoiled.”

Perhaps more than anything else, the beauty and breadth of Montana portray a way of life, a special mood, an opportunity to avoid the growth follies of other regions. Montana still retains her natural uniqueness and diversity only because of a relative lack of growth caused by remoteness, rugged terrain, harsh climate and low population. Ironically, these protective qualities of the past now attract destructive forces.

Rural subdivision and energy development pose unprecedented threats to a disappearing life style where one can still find meaning and self-respect apart from the neurotic consumerism of American society.

Montana life styles are intimately tied to the land. The remaining natural qualities of the land are the essence of an enduring quality of life. To recognize this is to reject the “bigger is better” equation worshipped by the growth mongers.

illustrations by Vern Craig

Some will say there's little cause for concern. The stock market is down, they say, and we're obviously headed for a depression. Perhaps. But we've been heading for this conclusion for years while blindly assuming the boom will never bust—that more growth will make us all richer.

However, our true wealth depends on the extent to which we can seize new opportunities and adjust to a more rewarding life. A life of simple self-sufficiency will encourage our inborn creativity which allows the full expression of the human potential. Energy-intensive machinery can be replaced by labor as a means of restoring jobs, quality and pride in goods we make and use. This, I suppose, boils down to whether we want to survive in dignity or perish in an ant heap society.

Delays are built into the process of depressing growth and switching to new life styles, just as it takes perhaps 50 years for the population to stabilize after an average of two children per family has been reached.

To guide a 50-year process, we need institutions which look 50 years ahead. But we seem unable to recognize and guide those decisions which will affect us during future decades. This is why independent, short-run decisions made in the "commons" usually fail to apply the brakes at the right time with the right responses.

So the crash of the material growth segment of our economy seems unavoidable. The immediate question is how much of the quality of life will be sacrificed to ill-conceived paranoia? Will we harness Yellowstone Park's Old Faithful to supply electricity for second homes? Or will we change our consumption patterns today to avoid disaster tomorrow?

Montana stands at a historical crossroads. National pressure to perpetuate the "more is better" mentality threatens to impose upon us a disproportionate level of growth impact. Corporate America is casting covetous eyes on Montana's rich resources. Material growth may soon stabilize and even decline in other overextended parts of the country. But to what extent will Montana suffer from the spasms of a growth monster in its final death throes? For truly, we have the most to lose.

Unfortunately, politicians, with characteristic short-run views to the next election, don't level with their constituents. We are told to win the fight against inflation when the real war must be waged against our own self-destructive gluttony.

CONCLUSIONS

The future growth of the human potential will diminish as material and population growth increases, if each human, each corporation, each nation is allowed to exploit the commons (the earth's resources) up to the ability of each to do so. There is already grim evidence, as indicated elsewhere in this issue (see page 26), that Montana's carrying capacity—the level of growth that can be sustained

in perpetuity without losing key physical, ecological and psychological values—is being exceeded in many parts of the state, such as the Gallatin Canyon.

Montana's carrying capacity depends partly on physical land capability such as water supply and natural hazards. However, the real determinants of carrying capacity are the attitudes of people toward the values which enhance the quality of their lives. When these values are lost because of insensitive development, the carrying capacity as determined by our heritage, life styles and natural amenities is exceeded. These attitudes toward quality of life need to be studied as the basis for badly needed long-range goals, which must focus on limits to growth.

Land use policy should provide for a Commission on Growth, with provision for widespread public participation. The commission could address—and perhaps answer—the questions necessary if Montanans are to retain any control of their destiny. If Montana continues to attract business as a matter of policy, let it be businesses which foster native skills. Let us have the wisdom to return to a "small is beautiful" philosophy predicated on farmer's markets, crafts, bicycle shops and the one-to-one interpersonal closeness that high speed culture has almost destroyed.

Perhaps personal adjustments in life style can't accomplish much. Nevertheless, we must try. People can more easily cope with individual conscience than grasp the mind boggling complexity of the overall growth dilemma.

Montanans are, I believe, a cut above people from less fortunate regions because of the special way of life still available. With this assumption, there is surely hope.

Each of us, in vastly varying degrees, is an individual growth agent and a keeper of the commons. The extent to which we exploit the commons by contributing to material growth depends on everyday personal decisions about family size and resource consumption. Many people are frustrated because they seem locked into artificial systems which require greater amounts of scarce natural and energy resources. So many seek alternative strategies for survival. These people generally feel society may be heading toward destruction, and there is little they can personally do to reverse the forces of unrestrained material growth. But, still they refuse to be a part of the growth equation contributing to the decline. This growing minority actively seeks social reform—an encouraging trend, no doubt.

Unfortunately, many others seem oblivious to the relationship between their second home on the lake and loss of the enduring qualities of their lives. These people—and everyone else, for that matter—should sincerely answer this question: "Do we really want to contribute to the destruction of our children's future?" 🐾



SUBDIVISION INVENTORY:

500,000 acres already split—with no end in sight.

Over half a million acres of Montana land is subdivided into pieces 40 acres or less, according to results of a statewide subdivision inventory completed by the Environmental Information Center (EIC).

Counties that top the acreage list include Flathead, 56,441 acres; Ravalli, 50,267; Missoula, 40,815; Musselshell, 33,031, and Gallatin, 19,999. These five counties include over half the recorded subdivided acreage in the state. (See chart for results from the 35 counties inventoried.)

From certificates of survey and subdivision plats in 35 of the state's 56 counties, EIC came up with a total of 334,017.9 acres subdivided into 114,085 lots. Because of inconsistencies in subdivision recording processes and unrecorded contract-for-deed sales, EIC projects this subdivided acreage is actually closer to half a million acres, which still could be a low estimate.

The inventory was conducted in summer 1974 by EIC staff members Tina Torgrimson and Rodd Hamman and volunteers throughout the state. Data collected included location, ownership, filing date, acreage and number of lots in each subdivision. Because of time and distance involved in collecting even minimal data, 21 counties were omitted from the inventory.

The EIC inventory is the first citizen effort of its kind in the nation. The EIC, a Helena-based non-profit citizens' group, monitors the activities of the legislature and state agencies and works to build stronger grass-roots support for the wise use of Montana's resources.

Phil Tawney, EIC director, said the need for an inventory was recognized during the 1973 legislative session when citizens realized that nobody—including state and county governments—had any idea of how much Montana land was subdivided. Therefore, Tawney added, nobody understood the effects of rapid, uncontrolled development on agriculture, wildlife habitat, watersheds, critical areas, taxation and costs of county services. The inventory was launched to give Montanans proof of the extent,

pace, costs and ramifications of subdivision development, Tawney said.

When all the results are compiled, the inventory will show:

- the total amount of land (state, federal, private

SUBDIVISIONS

COUNTY	NUMBER OF LOTS	ACREAGE
Beaverhead	308	1,867.3
Big Horn	786	661.5
Broadwater	53	151.1
Carbon	1,287	2,620.6
Cascade	1,090	8,459.6
Custer	1,218	17,876.1
Deer Lodge	1,203	1,832.2
Fergus	106	1,460.0
Flathead	19,182	56,441.7
Gallatin	4,472	19,999.4
Glacier	247	634.6
Golden Valley	52	1,204.0
Granite	975	3,887.5
Jefferson	737	2,866.2
Judith Basin	721	1,460.2
Lake	2,250	9,879.6
Lewis and Clark	3,006	10,659.0
Lincoln	1,979	2,993.8
Madison	2,114	13,475.0
Meagher	206	1,401.9
Mineral	417	2,135.5
Missoula	54,823	40,815.5
Musselshell	1,049	33,031
Park	1,849	3,051.9
Pondera	50	557.5
Powell	281	6,928.0
Ravalli	7,560	50,267.2
Rosebud	50	454.2
Sanders	658	1,398.3
Silver Bow	1,081	2,129.3
Stillwater	1,209	8,713.4
Sweet Grass	86	703.2
Teton	111	352.9
Toole	6	2.081
Yellowstone	2,881	18,646.6
Total	114,085	334,017.9

and corporate) statewide and county by county and what percentage of private land has been subdivided.

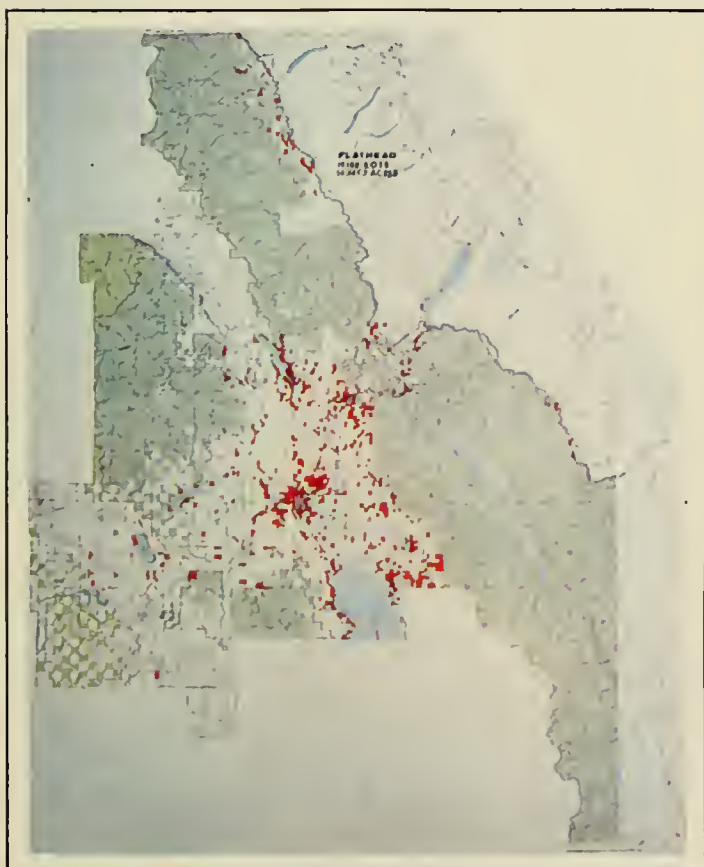
- the pace of subdivision development, particularly in relation to introduction of new subdivision laws.
- a determination, county by county and statewide of how many acres of subdivisions are on agricultural land, wildlife habitat and floodplains. This data will also be included on county subdivision maps.
- a total of all Burlington Northern land in the state, mapped and with an interpretation of the consequences to Montana of that ownership.
- economic impact studies in specific areas about the public costs of large-scale land development.
- identification and discussion of the problems involved in areas like Flathead Lake, Gallatin Canyon and the Bitterroot Valley and in specific developments like Shining Mountains, Sun Dial, Ponderosa Pines and Four Seasons Playground.
- examination of the status of Montana land use laws in relation to the subdivision inventory results and recommendations for improving the subdivision process.

All information will be public and distributed to citizen's groups, county officials, planning boards and legislators.

Early this year, inventory results, with updates and appropriate articles by Montanans, will be published in a paperback book. 🐻



The EIC inventoried 35 counties in its subdivision study. We would like to reproduce all 35 maps here, but unfortunately, because of limited space, we can't. However, we chose three of the most graphic examples—Flathead, Ravalli and Musselshell—to illustrate how extensive subdivision development already is in Montana. The red areas are subdivided. Because of inadequate recording, even these illustrations may be a conservative presentation of the problem.







THE CRAZY MOUNTAINS

Primitive, but vulnerable.

Nestled among the clouds in central Montana rests an incredibly beautiful outcrop of arduous peaks—the Crazy Mountains. Abundant wildlife, historic sites, a varied bounty of recreational opportunity and crystal clear streams characterize this isolated mountain range. The Crazies have, for the most part, avoided hordes of mountain-seeking recreationists. So the area remains remote, unscarred and to most, unknown. This could change in a hurry, though. Unlike many mountain ranges, the Crazies aren't all public land. Every other section lies in private hands and thus is vulnerable to development. As you read this, recreational land developers eagerly eye the primitive and fragile Crazy Mountains. photos by Harrison Fagg







THE GALLATIN: A good chance to question growth or another splendor to squander?

by Bill Schneider

Should Montana allow one of its most scenic and wildlife-rich regions to grow in an unplanned, unregulated and, yes, sometimes unwanted fashion? Can people really “harmonize” with nature? Or, in attempting to do so, will they destroy the very values they wish to retain—the land’s natural beauty, resources and integrity?

Understandably, developers hold with the harmonizing theory. In contrast, some Montanans strongly support slow-growth or no growth thinking. But many people wonder. They face such questions—without answers.

Today, land developers are busy all across Montana. Thus, an article questioning every growing part of the state would soon reach book length. So this feature focuses on southern Gallatin County, just north of Yellowstone National Park.

The Gallatin is growing—not in size, but in human density. It’s growing for the same reasons the Flathead, Bitterroot, Yellowstone, Madison and other mountain valleys are. Intense interest in the outdoors—coupled with a continuing trend toward “country living” and more free time—funnels growth into regions rich in recreational opportunity, scenic grandeur, clean air and water, wildlife, wilderness and, as it’s often called, “the good life.”

The Gallatin has all this—in *spades*. In turn, it has some serious growth-related environmental and socio-economic problems. And apparently, things are going from bad to worse.

However, a discussion of growth can’t possibly be limited to county lines or any such artificial boundaries. One can’t grasp the growth issue without understanding and believing the basic biological axiom that everything is connected to everything else, like a worldwide web of life. When

man disrupts one strand of this web, he can unknowingly start a repercussion—sometimes with disastrous consequences.

This, incidentally, is usually the land developer’s first mistake. He plans to the finest detail, packing in all available on-site environmental controls—those that are economical, at any rate—in attempting to “do the best job possible.” But he doesn’t fully investigate the long-term, interrelated and/or cumulative impacts of his development.

So it goes in the Gallatin Canyon.

Is this Big Sky’s country?

Around 1950, “The Big Sky” was the title of a book A.B. Guthrie, Jr. wrote. Later advertising agencies borrowed it and plastered it all over promotional and Chamber of Commerce-type publications. And then about 1969, people started hearing about Big Sky of Montana, Inc.

They heard mostly good news. It seems almost everyone welcomed the gigantic real estate and recreation complex. And the site—formerly a semi-primitive side drainage in the Gallatin Canyon—met with little disfavor. The highest state officials, most state agencies (including the Department of Fish and Game), citizen groups, business organizations and almost everyone applauded Big Sky’s arrival.

Then, a few foes surfaced. They began raising some embarrassing questions on the far-reaching aspects of the development. Ironically, some of their points are coming true today—only five years later.

The opponents, organized as the National Forest Preservation Group (NFPG), focused on the last two of three land exchanges between the Forest

continued

Service and Burlington Northern, Inc. (BN). These exchanges gave vital public sections, including the site of Big Sky's Mountain Village, to BN. Then, BN promptly gave them to Big Sky in exchange for stock in the development.

The exchanges helped Big Sky to reality and created a large developable block of private land for BN. In return, the public received scattered sections of remote, nondevelopable land.

This point—development *potential* of the land—disturbed the NFPG greatly. They thought the land acquired by the public couldn't be developed in most cases, regardless of ownership, because of rugged terrain or other limitations. And they tried, without success, to determine what BN would do with its new acquisition.

They insisted the distant ramifications of the exchanges were never known or even considered. And they wanted the entire land exchange policy studied before—not after—this trade was granted. In short, the opposition petitioned the FS to learn the real impact of the land exchanges instead of “attempting to justify the Big Sky project,” as the NFPG put it.

In the end, however, opponents ran out of options, and Big Sky received the go ahead. Immediately thereafter, condominium complexes sprouted along the West Fork of the Gallatin. Waving the “good planning” banner, Big Sky plunged eagerly forward.

Figures on the bigness of Big Sky change periodically. Generally, plans include a golf course, tennis courts, an 11-mile highway spur, a \$6 per night “campground” for recreational vehicles only (no tent camping allowed) with just-like-home services, two incorporated towns (Meadow and Mountain villages), somewhere between 1,500 and 3,500 condominiums, 23 miles of ski lifts and gondolas, a dude ranch, convention facilities, a commercial center, hotels and more. All this carries a big price tag—up to \$200 million, according to Big Sky spokesman, Mike Baker.

Considering all this, *Big Sky* does indeed seem like an appropriate label.

Big Sky officials boast of environmental measures such as tertiary sewage treatment which produces water “as pure as drinking water,” protective covenants, underground utilities and prohibition of timbering which “denudes” the landscape. In fact, promoters predicted all future developments would use Big Sky as a “model of good planning.”

In summary, Big Sky wants a “white hat” image, because, as Big Sky officials put it, “the favorable aspects . . . far outweigh any adverse factors” Unfortunately, however, the planning occurred in a vacuum, removed from the real impacts of *this kind* of development.

One of these “real” impacts is loss of wildlife habitat. Certainly, Gallatin development will



Is land development like Big Sky really good for Montana—when all the long-term and far-reaching impacts are known? F&G photo by Bill Schneider

adversely affect wildlife, as illustrated elsewhere in this article.

Energy consumption presents another excellent case in point. Did Big Sky and the FS really care about the full effect of the development's excessive energy needs—or its impact on wildlife?

First of all, Big Sky is mostly owned by five large corporations—the Montana Power Company (MPC), BN, Continental Oil (Conoco), Northwest Airlines and Chrysler Corporation. At least three of these—with the possible exception of Chrysler and Northwest—have deep financial interest in promoting *increased* energy consumption, not conservation as the nation needs today.

Montana Power, in addition to holding Big Sky stock, also services the development. During planning, MPC recommended using electricity for heating, air conditioning, etc. So now, Montana has an all-electric Big Sky.

Planners brag about using this “clean” energy. By using electricity for all facilities, they contend, “the *Gallatin Canyon's* environment” experiences the least possible air pollution and other environmental disruption, the only worry being fireplace smoke [emphasis added].

Apparently, power demands created little concern at Big Sky's inception. The FS Environmental Impact Statement, as required by the Environmental Policy Act, didn't even mention the word “energy.” And a lengthy “environmental report” by Big Sky failed to acknowledge any adverse aspects of energy extravagance.

In 1971, a small (50 kv, but capable of handling 69 kv) power line was built from Bozeman Hot Springs to Big Sky. To Canyon visitors, it's the one with the poles painted green to blend or perhaps "harmonize" with the surroundings.

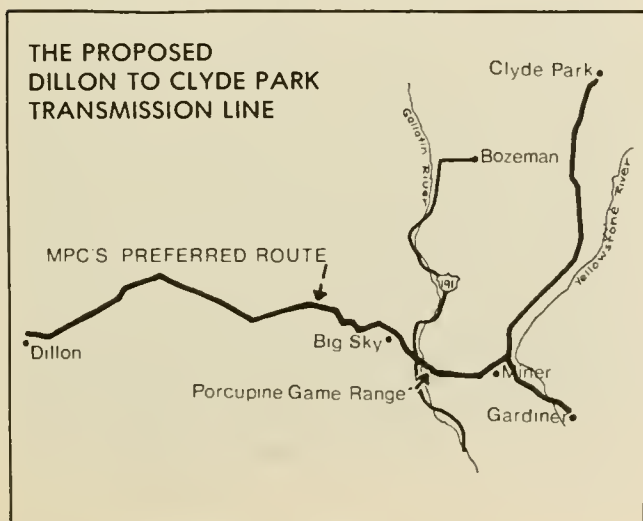
Now, just three years later, the 69 kv line suddenly becomes grossly inadequate, according to Big Sky stockholder, Montana Power. In a recent application filed under Montana's Utility Siting Act for a new 161 kv line, MPC states, "It will be impossible to maintain these voltage levels at Big Sky during the winter of 1975-1976 with only the Bozeman Hot Springs-Big Sky 69 kv line. . . ."

The new line, if allowed along MPC's preferred route, will extend from Clyde Park (just north of Livingston), south along the Yellowstone River up Paradise Valley to a small hamlet called Miner. Then, the line splits, with a short spur (69 kv) cutting through the primitive Tom Miner Basin on its way to Gardiner. The large section (still 161 kv) turns west. It goes through the primitive Porcupine/Buffalo Horn area (just south of the department's Porcupine Game Range) and hits Big Sky. From there, it violates still another wildland, Cedar Creek, on its way to Virginia City, where it continues on to Dillon.

Simply stated, the 155-mile power line corridor cuts through some of Montana's most scenic and fragile country, including three primitive regions, grizzly bear habitat and at least one top big game winter range—all so the Gallatin can grow.

How much growth is this? In the application for the Clyde Park to Dillon line, MPC writes, "Conservative estimates compiled by The Montana Power Company Marketing Department indicate a tremendous growth rate of 500% between the years 1973 and 1978 for the Big Sky area.

"This projected load for the Meadow and Mountain Villages at Big Sky, Montana of 30,000 kilowatts in 1978," the application states, "is approximately equivalent to the combined 1974 peak loads of Bozeman, Belgrade, Manhattan and their surrounding rural districts" [emphasis added].



The investor-owned utility also states the demand of Meadow and Mountain villages "... in 1973 alone exceeded the 1968 peak load for the entire Gallatin Canyon."

Whether the line is justified isn't the point here. The question is—why weren't such things discussed before Big Sky received its green light?

Last September, in East Glacier, Gov. Tom Judge discussed energy demands at the annual meeting of the federation of Rocky Mountain States.

"... We have only a finite supply of... coal, oil and the other energy resources that America so desperately needs," the governor emphasized. "Therefore, we must begin to make decisions not with the next few years in mind, but with the destiny of future generations as our underlying concern.

"Carried to its extreme," the chief executive warned, "an unlimited energy growth policy would simply mean that more agricultural lands would be disturbed and taken out of production, and our water resources would be irretrievably committed to industrial development."

And a recently completed \$4 million study at least partly confirms Judge's slow energy growth suggestion. This report—the Ford Foundation's Energy Policy Project—concludes that energy growth can be cut by more than one half without harming the U.S. economy.

Faced with this growing justification for slower and wiser development of energy resources, MPC still supports the new line to feed the expanding Big Sky area. But the power line represents only part of the far-reaching ramifications of this energy extravagance. The impact goes much further.

It goes to a sprawling trailer camp, called Colstrip, ironically also owned by the Montana Power Company. Here, energy companies cast longing eyes on Montana's already scarce water supply and strip mining shovels scramble acre after acre of wildlife habitat and ranchland. At the same time, MPC and other utilities propose four massive coal-burning generating facilities with as yet undocumented impact.

So, summarizing this, the link between Big Sky and Colstrip is more than a power line.

In fact, using MPC figures from the aforementioned application, one can closely calculate how much coal must be burned to generate electricity for the Big Sky area. In 1978, the Big Sky area will consume approximately 99,864 tons of coal.

The Colstrip generating complex, if allowed by the state, will provide power to Big Sky and similar developments. However, the power plants will also provide air pollution and other serious environmental problems as well as a socio-economic dilemma for eastern Montana—and especially the "boom and bust" community, Colstrip.

continued

In past months, Montana has been bombarded with advertising saying Big Sky, Hoerner Waldorf and the Anaconda Company might be short of power if Colstrip plants #3 and #4 aren't allowed. It seems the hard rule of supply and demand is out of whack. Instead of creating supply to meet demand, it appears demand is created to help justify providing the supply. One could compare this to buying a size 8 shoe for a child with a size 5 foot, and then stretching the foot to fit the shoe.

Is the true color of Big Sky's "hat" coming through? Could it be that a thin veil of white conceals a thick layer of Colstrip black?

But Big Sky isn't the only "hat" deserving discussion. For instance, Ski Yellowstone—another Big Sky only not quite as big—is proposed in the southern tip of Gallatin County, near Yellowstone Park.

Does Montana need a ski corridor?

Ski Yellowstone has most of the makings of Big Sky—695 condominiums, 345 single-family lots, a marina, hotels, cafes, lounges and all the rest. Hans Geier, president of Ski Yellowstone, assures MO his development is less than half the size of Big Sky. But half as big as Big Sky is still *big*.

(The articles of incorporation filed at the Montana Secretary of State's office list all five Ski Yellowstone board members from the same address—Smith & McCleary, a law firm in York, Penn.)

Ski Yellowstone promoters hope to complete a "ski corridor"—a string of resorts attracting national visitation. This "corridor" will, if Ski Yellowstone supporters have their way, start with Bridger Bowl near Bozeman, and then head south to Big Sky, Ski Yellowstone, Grand Targhee in Idaho and end at Wyoming's Jackson Hole. Ski Yellowstone is, of course, the essential link.

In reality, the "corridor" might have a different meaning for Montana. It could mean the Gallatin will become a California-type ski development—several large, "well-planned" resorts linked by rows of trailer courts, taco stands, beer taverns, mini golf courses, tourist traps—you name it. Because of the lack of areawide planning or zoning in Gallatin County, the canyon could grow into a neon-lined asphalt stripe—approximately 50 miles long and a half-mile wide.

Dr. John Montagne of Montana State University, Bozeman, headed a study team which ground out a three-inch thick, on-site, biophysical analysis of Ski Yellowstone. In it, Montagne wrote, "Not surprisingly, many biophysical aspects of Red Canyon [the development site] would be *enhanced* if the proposed development is carried out" [emphasis added].

Obviously, the efforts of Montagne's team fell far

short of adequately assessing the impact of Ski Yellowstone. Granted, environmental concern may make Ski Yellowstone a well-designed development within its own boundaries, but this concern doesn't make it a good development. Instead, Ski Yellowstone is merely one more arm of a land development monster which threatens to make Montana a miserable mess. The mere fact that the development is *there at all* creates problems for wildlife.

Last September, Geier brought his top planner, Gage Davis from Denver-based Beardsley-Davis Associates, Inc. and a consultant, Don Alford from Bozeman, to meet with the department. Throughout the two-hour session, they reached out for ways to "improve our development" or "make it more compatible with wildlife."

They didn't receive many suggestions, though. Instead, they heard questions on energy consumption, coal-burning power plants, big game winter ranges 50 miles from the proposed resort, roads, rivers, power lines, etc. The department feels the time has arrived to expand suggestions from rearrangement or protection of wildlife habitat on the development site to the growth issue, in general.

Director Wes Woodgerd explained how each development only takes a dozen elk, two grizzly bears, ten acres, five miles of trout stream, etc. "Inch by inch," Woodgerd emphasized, "this is eating us up."

This brings to mind the old "salami" adage. Each sandwich takes only one small slice, but after awhile, all that's left is the string.

"You must look at these things as systems," followed Fletcher Newby, deputy director, "not as a vacuum."

In response, Davis stated, "We just can't grapple with that. I just don't know how you deal with this sort of thing."

But developers must deal with it. It's certainly their moral responsibility and probably their legal obligation. They can't, as Jim Posewitz of the department tells them, "put on blinders for convenience."

Who will build second homes for wildlife?

Neither Ski Yellowstone nor Big Sky rests on vital elk winter range. Nonetheless, such developments indirectly put a real bite on local and migratory elk populations.

The Porcupine Game Range, a department game management area purchased by sportsmen for elk winter range and public recreation, sits only a few miles south of Big Sky. The resort, increased rural subdivision and other satellite development (bars, cafes, etc.), have already made part of the range unusable by elk.

John Cada, department biologist in charge of the range, feels quite strongly that "any activity in the area, and especially at night when the elk move down to feed," spells bad news.

Also, the disputed Beaver Creek South development—a high-density subdivision with commercial facilities—will, if permitted, go in directly adjacent to the game range.

The vital winter range extends on both sides of two-lane U.S. 191. And elk frequently cross the highway at night. If the highway were widened to four lanes, it could, Cada feels, create a complete barrier for elk.

Researchers for a National Science Foundation (NSF) study on the impacts of large developments on semi-primitive areas interviewed canyon hunters—78% of whom believed Big Sky would have a harmful impact on the quality of hunting.

However, sportsmen—with the exception of a dedicated minority—weren't overly excited about working to protect the resource they enjoy so much. Apathy reigns, even though the NSF team found (1) the total hunter use had increased by 40% in just two years—1971-1973, (2) critical wildlife winter range was rapidly disappearing and (3) new and seasonal residents were organizing to ban all hunting.

Wildlife has great value to a significant proportion of canyon residents, the report concluded, "but relatively little action is taken to prevent inroads on wildlife habitat."

Habitat loss and increased human pressure also threaten one of Montana's most majestic wild animals, the grizzly bear. The grizzly requires vast wildlands—a rapidly disappearing resource in the Gallatin.

The great bear simply cannot coexist with man. When man and bear confront each other, the bear usually loses.

Unfortunately, Ski Yellowstone encroaches on grizzly habitat. Grizzlies may not frequently visit the development site—Mt. Hebgen. But still the

MINI-EDITORIAL

The grizzly, a public resource, resides almost totally on public lands, managed by public officials responsible to the public. Today we closely tie the bear's very existence to the "way of life" Montanans presently enjoy and wish to perpetuate for unborn generations. Obviously, the public is interested in the grizzly's future.

So should public land managers permit any development damaging to the bear or its habitat?

development will remove a vital buffer zone between civilization and remote lands required by the bears. Testifying to this, National Park Service researchers saw grizzlies in Cabin Creek, just north of Mt. Hebgen, this past summer. Asked if they would back off to protect the bear, developers declined even to address the grizzly issue, terming the question "hypothetical."

Today, the cry to preserve the grizzly echoes across the nation. Meanwhile, Gallatin National Forest Supervisor Lewis E. Hawkes must decide whether to grant Ski Yellowstone a special use permit for a ski area the developer needs to enhance real estate sales.

(The Ski Yellowstone situation represents only one example of the FS' rapidly growing role in monitoring growth. Undoubtedly, FS policy on land development will help decide how—and how fast—the Gallatin grows.)

Will the bears in the Mt. Hebgen area—a small slice of already scarce grizzly habitat—survive the threat of Ski Yellowstone and similar second-home subdivisions? By this time next year, the public will know. Hopefully, Supervisor Hawkes and other public officials recognize the national and local significance of grizzly habitat. Not widely realized until recent years, the bear now stands as a vital ingredient in the western way of life Montanans wish to retain.

Encroachment by encroachment, the grizzly could vanish from the Yellowstone area, and certainly from the Gallatin. Obviously, the FS and this agency's land use policies will help determine the fate of Montana grizzlies, not only in the Gallatin, but elsewhere as well.

Finally, one couldn't leave the grizzly without mentioning the large tract BN put together in the Big Sky exchanges—the Yellow Mules and the South Fork of the Gallatin. "The Park Service study team has indicated there are a minimum of four grizzlies in that area," Cada comments. "Certainly the habitat will be altered. And from what we know about grizzlies, it's not going to have a neutral or beneficial effect. It's going to have a detrimental effect."

The Gallatin angler apparently has a better future than the hunter, although he still has some cause for concern. For instance, spring runoff from

continued



Mt. Hebgen on the right, the proposed site of Ski Yellowstone, another Big Sky only not quite as big. The photo was taken from Kirkwood Ridge. F&G photo by Bill Schneider

exposed Big Sky ski runs cut gaping gullies through Mountain Village and other parts of the resort and flushed large quantities of sediment into the Gallatin. But in its environmental report Big Sky officials said, "The stream running through the project will be improved both aesthetically and as fish habitat." However, sediment and trout don't mix well.

Today, the impact on the aquatic resource isn't drastic. However, disaster may loom on the horizon in the form of an improved U.S. 191. The NSF team put it well by saying, "Probably the greatest potential danger to the fishery is the possible widening of U.S. Highway 191 and the concurrent loss of aquatic habitat." Highway construction often means stream channel alteration which destroys fish habitat.

Lastly, fish and wildlife also bolster the local economy. The NSF report estimates fish and wildlife will contribute \$50-100 million to the Gallatin economy in the next 25 years. Specifically, game species brought in \$1,938,575 during 1971 and 1972 and nonhunted wildlife uses (sightseeing, photography, etc.) tallied \$238,395 in the same period.

Are developers really devoted to good planning?

Here's a list of questions the FS, Ski Yellowstone, Big Sky and other developers should answer before they become committed to a development:

- What are the direct, indirect and long-term impacts on fish and wildlife?
- What are the total ramifications of expanded energy demand? Considering the national energy shortages, is it wise to devote so much energy to all-electric second homes and mechanized outdoor recreation?
- Is the actual resource demand—wood, metals, plastic, etc.—of second-home development justified?

- Are present highways, airports and other transportation systems adequate to handle increased traffic? If not, will the developer or the taxpayer pay for improvements? And what are the environmental consequences of such improvements?

In the Gallatin's case, the Bozeman airport is now undergoing improvement at public expense—additional terminal space, a new runway and more taxiways.

Follow suit, Ski Yellowstone developers and West Yellowstone businessmen want public funds to improve their airport.

Citizens fear U.S. 191 will soon need widening or two extra lanes. However, Paul Devine of the Montana Department of Highways, won't confirm this. Using figures supplied to him by Big Sky and Ski Yellowstone, he feels the present highway will suffice for "at least 20 years." Devine notes that most new traffic occurs during the winter ski season. If this increase came in warmer months, he theorizes, the added load coupled with the summer tourist traffic from Yellowstone Park could be too much for the curvy two-lane.

Because of unavailable statistics, Devine couldn't estimate the impact from the fast-spreading "spin-off" developments which funnel even more vehicles into the Gallatin.

- Will lack of areawide planning and zoning contribute to the Gallatin Canyon's demise?

In Colorado and California, this unfortunate fact caused "urbanization" of rural mountain valleys. To illustrate, Vail, Colo. grew from a sleepy sheep ranch to a "strip city" of 20,000 in 12 short years. And no regulations or controls exist to prevent a repeat performance in the Gallatin. Keep in mind that MPC has already projected the Big Sky area will consume as much electricity as the peak loads of Bozeman, Belgrade, Manhattan and surrounding rural districts by 1978. The 1970 populations of these three towns top 22,500, and rural residents certainly number in the thousands.



Big Sky helped promote the real estate industry in the Gallatin Canyon. Now, land sells at elevated prices. But apparently there's no shortage of buyers. F&G photos by Bill Schneider

MINI-EDITORIAL

Even a brief look at the Gallatin Canyon makes one point perfectly clear. The valley needs a "limit to growth," and it needs it now.

Every year without action pares down the list of viable options. Wait too long, and commit the still-rural canyon to a near-urban fate. And even worse, other regions may soon follow.

Luckily though, those wanting to protect the Gallatin have several "limits" within reach, such as:

- doing everything possible to protect wildlife habitat, especially big game wintering areas and grizzly habitat.
- a forceful "no" for Montana Power Company's proposed Clyde Park to Dillon transmission line.
- denial of the Ennis to Big Sky road.
- keeping U.S. 191 in approximately its present condition.

- Have large developers fully considered what satellite or "spin-off" development might mean for the community?

Instead of discouraging satellite development, large resorts often encourage it. Testifying to this, David Penwell, past director of administration for Big Sky wrote to Don Brelsford, Beaver Creek South developer, cheering the coming of his high-density subdivision. "Because of the unavailability of housing facilities in the future for a rather significant number of people," Penwell wrote, "we certainly do welcome plans [additional housing] with proximity to the Big Sky project. . . ."

On the other hand, Big Sky opposes some canyon development. "It [some spin-off development] can't help but hurt us," notes Gustav Raaum, president of Big Sky. "We at Big Sky could have the fanciest sewer plant in the state but along the canyon the developers could put septic tanks next to the creek and ruin the watershed. I know of several trailers which are actually sitting in the creek."

The Helena-based Environmental Information Center recently found that over 20,000 acres have already been subdivided in Gallatin County. Because of inadequate recording of land transactions, the EIC termed the figure very conservative.

- What additional development—roads, utility corridors, etc.—might be needed? Why didn't Big Sky or the FS discuss the possibility of an Ennis to Big Sky highway and/or power line before the development became entrenched?

- Referring to Big Sky specifically, what will BN do with the 15,000-acre block of developable land adjacent to Big Sky obtained in the exchanges?

Bill Parsons, Bozeman representative for BN, put fears to rest. "BN has no plans to develop land anywhere," he told MO. "We're in timber production for the long haul," he assured. "This doesn't go well with land development."

On the other hand, NFPG continually insisted things are too financially "ripe" for BN to by-pass land subdivision.

Also, it could be argued that BN is *already in the land development business* because it traded 1,927 acres to Big Sky in return for part ownership in the resort.

Allaying the Gallatin's growth pains?

As usual, problems are easily explored, but solutions difficult to find. So it is with the Gallatin.

In addition to the standard remedies—writing your congressmen, joining citizen groups, becoming involved and other such important actions—two specific cures come to mind.

First, citizens should view the proposed Clyde Park to Dillon transmission line as a limit to growth. Its denial could slow Gallatin growth to a livable pace. Refusing the line won't stop growth, but merely give it some conscience. But if the line must be, it should at the very least, be routed around key wildlife areas.

Canyon residents then should search for alternatives to energy-extravagant development. One could be to maintain or improve wildlife habitat for enjoyment by all. Another could be to emphasize nonconsumptive outdoor activities, such as the nonmechanized winter recreation concept. The Montana Wilderness Association is already studying this as an alternative to Ski Yellowstone. (See *Montana Outdoors*, Nov./Dec. 1974.)

These options, it could be argued, produce economic gain without violating land values. They don't provide large profits for land developers. But such alternative development can generate the most community good—especially for the long-term picture.

As another remedy, Gallatin supporters could view wildlife as a goal around which to rally—an indicator of which way their life is going. If habitat continues to disappear making life more and more impossible for wildlife, perhaps the same fate awaits man. Or at the very least, the quality of life will deteriorate.

The Gallatin's story all comes down to what Montanans want. Should they "Keep Montana Montana" or, should they settle for something less? 



LAND USE STUDY: What kind of growth should occur where? The Montana Environmental Quality Council goes after answers.

by Ronald J. Schleyer

Untouched landscapes, clean air and water, abundant wildlife and unhurried daily routines—these attributes form a priceless treasure common to Montanans.

But if demands for land continue to increase, how long will the treasure last? Will the demands bring benefits sufficient to repay the loss?

Those are among the questions in the Environmental Quality Council's "Montana Land Use Policy Study," which is likely to guide both the tone of legislative discussions and the shape of land use law that may emerge from the 44th Legislative Assembly.

The legislature's environmental advisory arm directed the study and other EQC projects under a two-year, Ford Foundation grant. University and government research was coordinated by Charles E. Brandes and released in November 1974 to provide "not a consensus but a current, comprehensive and systematic framework for . . . study and dialogue," according to EQC Director John Reuss.

In response to House Joint Resolution 9 (1973), which asked for a report on existing state land use policies and programs, the "Montana Land Use Policy Study" pinpoints sometimes contradictory land use policies inherent in state law and administrative procedure. It analyzes trends in the expanding need for feed and food, the growing demand for energy and minerals and the spreading appeal of Montana's physical amenities. The report concludes that a comprehensive state policy is vitally needed to control the potentially destructive effects of coming growth.

Allowing uncontrolled growth is itself a land use decision by government, the study implies. "Today, decisions are made in a fragmented, uncoordinated manner by 182 local governments (126 cities and

towns, 56 counties), 19 state departments and assorted independent agencies, at least 18 federal agencies, 7 Indian reservations and about 700,000 residents and an undetermined number of nonresidents.

"The system guiding these decisions," the study observes wryly, "is the same system that gave Los Angeles to California and Miami Beach to Florida. If history is any guide, it is unlikely that this system will treat Montana any better."

CALIFORNICATION COMING?

In fact, the shadow of Californication already has fallen on Montana, according to the study. Montana's urban areas (as defined by the U.S. Bureau of the Census) are growing substantially faster than either the cities within them or the counties that contain them. In plain terms, this urban area boom is the suburban sprawl already familiar to many Montana newcomers.

Separately derived estimates and analyses of subdivision activity reported in the study indicate about *500,000 acres have been subdivided statewide—nearly 1% of the state's total private land*. The figure represents a subdivided acre for every 1.4 Montana citizens in 1973.

Subdivided acreage is growing by perhaps 30% a year and has contributed substantially to a decline of 1.6 million acres in total agricultural acreage in the past decade, the study reveals. Irrigated farmland has been particularly hard hit. In general, average agricultural productivity has been depressed in counties with rapid subdivision growth—indicating that prime farmland is considered prime land for homesites. The study questions the wisdom of this trend in the face of world food shortages, and reminds citizens that the Montana Environmental

Policy Act (1971) asks each generation to act as trustee of the environment for succeeding generations. Practically speaking, land subdivision is irreversible.

Uncontrolled land use burdens taxpayers too. Much of the land purchased for commercial, industrial and residential use is held for speculative purposes, a practice that confounds public revenue and expense forecasts, needlessly reduces agricultural production and disrupts the market for farmland and ranches.

Even when developed, many subdivisions fall on the minus side of any community cost and benefit tabulation that considers the school system; public water, sewer and roads; police and fire protection, and community health care.

If growth is inevitable and generates costs that affect all taxpayers, the study observes, the tradition that permits land use decisions made solely from the individual's perspective deserves careful scrutiny. Time for reflection is growing short, the study warns. Combined with current population trends, a population boom associated with extensive coal strip mining and energy development could push state population past the million mark by the year 2000, a whopping 43% increase over the 1970 census level.

DISAPPEARING AMENITIES

But what of the pressure on Montana's less tangible resources? "If the increasing demand for land is continually met," the study asks, "how long will our remaining social amenities last?"

The study analyzes land use powers, prerogatives and practices among seven state agencies (the departments of Fish and Game, Health and Environmental Sciences, Highways, Intergovernmental Relations, Natural Resources and Conservation, State Lands, and Revenue) and makes a surprising discovery. Taken together, laws that mandate agency powers provide little guidance to state officials in making consistent decisions that affect the use of land. Provisions in the law do not always support the policies that are stated. As a result, many economic, environmental and social conflicts await legislative direction—action that would sweep across all of Montana's laws with a clear, consistent and purposeful land use policy. Without this firm policy guidance, the study predicts, there will be "a step by step disintegration of the subtle and unique relations that now exist between the state's citizens and the land."

Beyond the pressing need for a cohesive land use policy, the study reports popular support for some kind of control. A survey showed a "compelling unanimity in the desire of local officials to preserve the agricultural values of the state."

EQC RECOMMENDATIONS

Three basic assumptions underlie recommendations proposed in EQC's policy study:

- that implementation of a state land use policy should be undertaken by the level of government closest to the people and yet capable of responsible action. For most land use issues, local government meets the requirements.
- that there are land use issues in which state government, representing all the people, has a strong interest and occasionally an overriding one.
- that all land use actions, government and private, should be subject to equal scrutiny and regulation.

The study rejects any application of statewide zoning and instead proposes an intergovernmental and public decision-making system that would neither disrupt strong traditions of local government nor interfere with legitimate expectation of citizens' property rights.

Two administrative functions form the heart of the proposed system and tie state and local officials together in a cooperative process of designating, regulating and controlling (1) areas of state concern and (2) developments of greater than local impact. A state Land Use Commission, a quasi-judicial, independent board within state government, would resolve conflicts among state agencies and between units of state and local government.

The study defines "areas of state concern" as localities and systems where uncontrolled development would result in the irreversible loss or damage to a resource valuable to the people of a region or the state as a whole. Potential areas of state concern include:

- areas affected by or affecting substantial public investments such as educational, medical and penal institutions; convention, civic and sports complexes, game ranges and major airports.
- areas including or having significant impact on historical, aesthetic, natural or environmental resources such as proven mineral reserves; significant agricultural, grazing and timberlands, shorelines and essential ecological systems.
- areas where development probably would endanger life and property because of natural or man-made hazards such as earth fault zones, landslide and avalanche pathways, fire-prone areas or airport flight paths.
- areas proposed as sites for new town development.

The local government with jurisdiction over a proposed area of state concern would hold hearings and make a recommendation to the Land Use Commission. If so designated, an area of state concern would be subject to locally drafted development regulations. An important facet of the process would be interim controls—issued when local government filed notice of a hearing after a request for designation—that would protect the area until the designation process yielded a decision.

A development of greater than local impact would include any development with significant effect beyond boundaries of local government jurisdiction. Major shopping centers, large subdivisions.

continued

industrial complexes and public works projects could qualify. Developers, including state agencies, would be required to apply for a permit based on established criteria and submit to a public hearing conducted by the local government, which could deny, approve or conditionally approve the development. The decision would have to consider benefits and detriments to the surrounding region as well as the locality—city or county—involved. The local government's decision could be appealed to the Land Use Commission.

Detailed guidelines developed by a state planning agency would help determine whether a given development qualified. Guidelines on the size of project, traffic generation and environmental side effects would vary throughout the state. For example, a development of greater than local impact in Broadus might not be classified the same way in Missoula.

To screen appeals and assist local governments in the two land use planning functions, a planning agency to combine existing state planning expertise is recommended. The consolidated agency would be part of a Department of Planning and Local Affairs to replace the present Department of Intergovernmental Relations. It would administer a broad range of state planning functions, including the Utility Siting Act (1973). The study also suggests formation of a joint legislative committee to supervise the Land Use Commission, and changes in the state taxation system affecting residential, agricultural, industrial and forest lands. Such changes would ease burdens on local governments faced with booming growth, protect agricultural land from undue development pressures and encourage proper forest management.

As vital as it is, the case-by-case land use review process proposed in the "Montana Land Use Policy Study" cannot lead to the future desired by Montanans without firm policy guidance. To define *what* Montanans want, the study recommends creation of a Commission on Growth and Montana's Future. The people would be asked to consider land use concepts and determine a priority of values in land use decisions.

"The Commission," according to the study, "also would provide tentative forums for Montanans to ask and answer the most fundamental question concerning development: *What* kind of growth should occur *where*?" It would also "substantially involve the public in its investigations and . . . guarantee representation of the great diversity of interests, aspirations and expectations of the people."

Lastly, the study contains a warning that "no matter how good the decision-making process, the public interest will still require protection from unrepresentative influence." Recommending passage of a strong public officials' financial disclosure law, the study points to the need for vigilance so the land use decision process isn't dominated by a single interest group. 🐻

SKI RESORTS: Do we need more? Results of MO Survey.

While researching and writing the Gallatin article, we asked this question several times, especially when thoughts turned to the proposed Ski Yellowstone development. In an attempt to answer it, we did a survey of Montana's 27 ski areas, excluding Big Sky.

Granted, the survey won't win recognition for scientific soundness. Nevertheless, it gives some meaningful insight into the future of winter recreation and ski resort development. Of 26 questionnaires sent to managers of ski resorts, 18 were returned.

Perhaps most important, exactly half (9 of 18) answered "no" to the question: "Do you feel Montana needs additional ski areas to accommodate increased interest in downhill skiing?" We asked if the resort owners anticipated an increase in downhill skiers in the future—13 said "yes," 5 "no."

These 18 resorts (remember, 8 didn't respond) provide downhill skiing for approximately 623,000 skiers. And the 18 said they could accommodate an additional 680,000 skiers annually. Twelve of the eighteen resorts plan expansion which, when completed, will provide facilities for another 172,000 skiers.

If expansion plans materialize, these 18 resorts will soon be able to serve 1,475,000 skiers annually. And this is a minimum figure—eight resorts didn't respond. The proposed Ski Yellowstone development will provide facilities for about 6,500 skiers annually.

We also asked if the resort managers thought downhill or cross-country skiing was more popular. All 18 said downhill was more popular. However, three noted ski touring "was gaining."

As a side note, we found some interesting statistics about the popularity of ski touring. The June/July 1974 issue of *Ski Business* magazine listed the imports of cross-country skis from Norway, Finland and Sweden into the U.S.: 1968—19,491; 1969—30,481; 1970—55,576; 1971—166,720; 1972—278,596, and 1973—310,798.

It could be argued these figures don't reflect actual sales or interest in cross-country skiing. But they do confirm the trend. 🐻



QUESTIONING GROWTH: Should Missoula grow? Businessmen say "yes," but the people say "no."

Will Missoula parents listen to what their children learn in school? Judging from the discoveries of one class, they should.

In spring 1974, the advanced sciences class at Sentinel High School conducted a detailed growth survey of Missoula residents. The students canvassed the city, asking important questions of some 2,906 citizens. The students took every step to assure the survey's scientific soundness. After all the data was in, the computer at the Missoula Votch Center tallied and correlated the results.

"The survey resulted partly because of frustration," notes instructor Richard Dill. "The frustration came about because it is nearly impossible to get anyone in Missoula to seriously consider the city's rapid growth and the probable effects."

For example, Dill points out, his students donated a copy of "Nongrowth as a Planning Alternative," by the American Association of Professional Planners, to the mayor and the City Council. At the same time, the students urged establishment of a committee to study Missoula's growth. Two years have passed and no committee has been formed nor is there even discussion about forming one.

Then, the Missoula Chamber of Commerce proudly reported things were going from good to better with its publication, "Missoula Data." Here, the businessmen noted Missoula's growth rate was more than double the nation's. However, the chamber wasn't worried. Instead, it presented the figures as "good news," hoping to attract even more people and industry.

The students and teachers at Sentinel viewed it differently. They wondered if Missoulians should be alarmed instead of patting themselves on the back. The students decided to examine the real opinions of the Missoula community with their survey. Looking at the results, it seems they were successful.

Q: Would you like to see Missoula grow?

A: "No"—65.07%, "Yes"—34.1% and "No response"—.79%.

Q: What ultimate size would you like to see Missoula?

A: "Under 100,000"—78.7%, "100,000-250,000"—15.83% and "Over 250,000"—3.98%.

Q: In your opinion what is the relationship between growth and quality of life?

A: "Growth decreases quality"—52%, "Growth increases quality"—20.96%, "Growth has no effect"—6.71% and "Unable to classify"—20.03%.

Some general conclusions also can be drawn from the survey, such as:

- About two of every three Missoulians interviewed do not want Missoula to grow.
- About 79% want to see Missoula remain under 100,000 population.
- Over one half of the persons interviewed feel growth decreases the quality of life; only 21% think growth betters their way of life.
- There wasn't a single category (occupation, age group, city area, etc.) in which a majority favored growth. ■

Next Time

Watch for these features in the March/April 1975 special issue on eastern Montana:

- | | |
|---------------------------|--------------------------|
| —the energy crisis | —Indian culture and coal |
| —the Tongue River | —the Birney-Decker area |
| —the Long Pines | —cottonwood logging |
| —coal development summary | |



photo by Vince Fischer

As he watched, a small band of elk slowly and silently strolled across the small clearing. Then, the shrill bugle of a mighty bull split the stillness. It seemed to echo again and again off the panorama of towering crags that dominated the horizon.

As he inspected his surroundings more closely, he saw the gem-like lake and the stately pines. He heard an angry pine squirrel and listened to a whispering mountain stream. And there in the mud was the track of Old Ephraim, the grizzly bear. The great bear had passed but a few hours ago.

Overwhelmed by the beauty of one of nature's finest moments, the man exclaimed, "This is a perfect place for a second-home subdivision."

A reminder that man does not live by development alone.

THE CATCHALL

ACRES FOR WILDLIFE

The most valuable gift to conservation ever made in the United States has been donated by a group of South Carolina sportsmen.

A 25,000-acre tract of prime waterfowl habitat, valued at \$20 million, was given to the Nature Conservancy, a land conservation organization, by 25 duck hunters, members of the well-known Santee Club.

The area, which will be known as the Santee Coastal Reserve, contains over 18,000 acres of irreplaceable wetlands. It supports a wide variety of wildlife.

Much sought after by commercial developers, this land will now remain as part of the nation's wildlife heritage, thanks to these conservation-minded hunters.—*National Shooting Sports Foundation*

THINGS TO DO IN FEBRUARY INSTEAD OF SEPTEMBER

Come February, the hunting seasons in most parts of the country have either ended or are about to. For those ready to retire their shooting gear and other hunting equipment for awhile, here are some "do it now" reminders for things that are best done at the end of the season rather than two days before it starts again.

Hunting guns scheduled for a vacation in the rack should be taken down and thoroughly cleaned before storage. Rifle bores should be cleaned with solvent and a wire brush until all traces of dirt and fouling are gone, then coated with a light film of oil. Spraying all other metal parts with one of the moisture-displacing, rust-preventing compounds will stop any beginning rust from residual moisture and

prevent potential rusting from summer humidity.

Dirt, dust, fingerprints and dried raindrops on the exposed lens glass of telescope sights should be removed with the special fluid and tissue used to clean camera lenses, then covered with lens caps. If you don't have the latter, they can be made from small pieces of cellophane or plastic bags held on by rubber bands. Muzzles of rifles and shotguns should not be covered during storage, however. There's less chance of moisture collecting inside if air is allowed to circulate through the barrel.

Leather boots will last longer and remain in better shape for next fall if they are washed with saddle soap and treated with neat's-foot-oil before storage. And you will avoid mildew by keeping

them in a dry place rather than in a damp basement or garage.

Insulated hip boots develop cracks in the rubber where folded if left this way too long. Prevent this by hanging them upside down on a mail-order wire boot hanger. Now is also the time to repair any pinhole leaks that may have developed before cold water on opening day of next fall's duck season reminds you that you forgot.

Wool clothing, coats, hats and pants will also last longer and store better if dry cleaned and mothproofed before putting away. Remember, too, that if any of your hunting gear or clothing needs replacement, many of these items are available at healthy discounts in February, but will be back at full list price next September.

Finally, if you don't really want to put anything away yet, remember there are always the rifle ranges and clay target fields. Shooting equipment isn't the only thing that shouldn't get rusty between seasons.—*Remington Arms Co. Newsletter*

SPRINGBOARD

"I would rather know of the existence of a wild lake than own a cabin on its shore.

"Is all development a one-way trail toward ultimate degradation of land? Can, or will, our civilization ever have the wisdom and self-restraint to stop the forward rush to develop every nook and cranny? Do we have the strength to pull back from any area of commercial expansion and deliberately invite or re-establish wilderness in a formerly trampled area?

"If the answer to that question ever turned out to be 'yes' I could go to my grave happy in the thought that America had learned something terribly important about the earth and people and the continuity of life. A 'yes'

answer would also tell the militant environmentalists that they could afford to relax a little and take a broader view of the human scene, instead of having to assume the narrow role of Implacable Enemy of All So-Called Development.

"Under these conditions I might actually vote for abandoning *some* remaining wilderness opportunities in favor of an effort to resurrect other and more important representative areas. Right now I don't dare, because the development process looks irreversible, often mindless—a seeming mad rush to wring the last fast buck out of the earth before the next generation gets here."—*excerpts from a letter to Lewis Hawkes, supervisor of the Gallatin National Forest, from Charles C. Bradley, Bozeman*

FOR DISCUSSION

WHAT THOSE DOLLARS BUY

As it has for the last 10 years, Montana will again receive federal funds from the U.S. Bureau of Outdoor Recreation for outdoor recreation development and acquisition. Montana will receive \$1,677,600 in fiscal 1975. Maybe you're one of the many citizens and sportsmen wondering what those dollars buy.

The federal funds are customarily divided equally between the state and city/county governments. To be used, the money must be matched by state or local funds.

At the state level, the funds provide half the cost of (1) acquisition of fishing access sites and recreation areas and (2) development of parks and recreation sites.

At the local government level, the federal funds provide half the cost of such facilities as swimming pools, city parks, ball fields, tennis courts, etc. The other 50% of the funding comes from city or county coffers.

The program is administered by the Department of Fish and Game through its recreation and parks division, a function delegated to the agency by the 1965 Montana Legislature. At that time, the

department was also given responsibility for statewide recreation planning, including aspects of planning for urban recreation. (Individual communities plan for facilities in their own town or city, however.) But the department is only the administrator; department funds are never used in city or county recreation projects.

According to Al Thompson, planning and program bureau chief, requests for the funds from cities and towns far exceed the money available, for the first time in the program's history. Projects not funded this year will be "first in line" for next year's program, according to Thompson.

DDT, VENISON DON'T MIX

The U.S. Forest Service and the Oregon Wildlife Commission have been accused of failing to adequately warn Oregon hunters about DDT levels present in some Oregon deer, according to a recent Associated Press report.

The Oregon Student Public Interest Research Group (OSPIRG) said statements issued by the two agencies didn't emphasize the danger posed by DDT in the fat and internal organs of deer. Some 426,000 acres in northwest states, including areas in northeastern Oregon,

SPRINGBOARD

"... If Congress hampers and handcuffs surface mining, which now produces almost half our coal output, there is simply no way we can meet that challenge [meeting energy demands]. We can try until hell freezes—but we will all freeze first."—*Carl Bagge, National Coal Council*

FOR DISCUSSION

were sprayed with DDT in summer 1974 to combat tussock moth infestations.

DDT residues found in the fat of deer from the area range up to six times the levels legally allowed in marketed meats, the OSPIRG report said. It contended the commission did insufficient research before issuing a statement.

Both the commission and the FS issued statements around Oct. 1 advising hunters about the possibility of DDT in deer from the sprayed area and suggested that hunters trim away fat and discard internal organs.

A regional forester had stated that although some deer might exceed DDT tolerances for marketed meat, no human health hazard was expected.

BIG PIKE BITES

As northern pike go, the one Hiram Mahoney caught last fall at Fort Peck Reservoir was *big*—28 pounds, 4 ounces, to be exact.

Mahoney, of Glasgow Air Force Base, caught the fish from shore, using a 25-pound test line and a minnow for bait. The fish measured 45-½ inches long and 21 inches around.

The largest northern on record for the reservoir is a 29-pound, 10-ounce fish taken through the ice by Glasgow fisherman Roger Moran in January 1973.

Mahoney's catch was verified by Mike Aderhold, Glasgow regional information officer for the department.—*F&G photo by Mike Aderhold*





Bruce Campbell, department game management biologist in Glasgow, about to attach a radio collar to an eight-point, "Monarch" bull elk. F&G photo by Mike Aderhold

MISSOURI BREAKS ELK BANDED

If you hunted elk in the Missouri Breaks last season and spotted one with a red and yellow collar, your eyes weren't giving out. It was one of game biologist Bruce Campbell's banded elk—and it also might have carried a miniature radio transmitter.

In February 1974, 27 elk were banded and 10 were added to the list in August. Of the 37 elk collared, 17 carried the miniature transmitters.

Tagging even 37 of the 500-head herd in the south Valley, south Phillips and Fergus County sections of the Breaks was no easy task. Campbell was accompanied by the department's chief pilot, Cliff Higgins. Higgins maneuvered the elk into open country with his helicopter, bringing them into the 30-foot range of Campbell's tranquilizer gun.

The tranquilizer used was Rompun. It's safe, but it doesn't always work because of the adrenalin a wild animal produces when it is downed. "We try to tie them up, get ropes on them, and they still get up and run off sometimes," Campbell said.

While the animal was tranquilized, biologists determined

sex, age and in the case of cows, whether they calved the preceding year. The neck band and sometimes a transmitter were then affixed.

Elk in the Breaks apparently eluded hunters two ways: (1) stayed close to their home range, moving only when directly pressed by hunters or (2) traveled out of the timbered area into more open rangeland.

"Elk by habit just don't like people around," Campbell said. "They know where there isn't any hunting pressure and they go there."

Ground and aerial observations of the animals have increased the department's understanding of the elk herd's home range, preferred habitat, spring movements and feeding habits. Impact of the fall hunting season will also be determined.

Campbell said he tried to band only experienced bulls and lead cows and only one or two animals in a given drainage. "By studying their movements under hunting pressure this year, we will be able to improve our management of this herd next year and every year after."

DOG DISH DELUXE

If you have a hungry dog around the house, keep him in mind when you butcher a deer.

"Boning" your deer—cutting away waste fat, bones, connective tissue, hock meat and tough odds and ends—saves kitchen time and storage space. Dump those scraps and trimmings into a big, covered roaster, cover with water and simmer until it's cooked up into a thick broth. Add water as needed. The cooking may take 24 hours or more, so an electric roaster is perfect.

Fish out the bones and other uncookables, add salt, a small onion (surprisingly, dogs love onion) and plenty of yellow corn meal. Continue simmering until it's too thick to stir. When cooled, it solidifies. Cut into chunks and freeze or store in an old refrigerator. The trimmings from one medium deer yield 10-15 pounds of this product.

The price is right, but best of all, it uses up those tag ends of a deer carcass and your dog will love the stuff.—*adapted from Winchester-Western Conservation Department newsletter*

COMMISSION NAMES LANDOWNERS OF THE YEAR

Several Montana landowners have been selected by the Montana Fish and Game Commission as "Landowners of the Year" for their accomplishments toward improving landowner/sportsman relations.

Those chosen include: St. Regis Paper Co., Libby, Kalispell region; U.S. Plywood, Thompson Falls, Missoula region; J. Stanley Milesnick, Belgrade, Bozeman region; Chester French, Helena, Great Falls region; Mary and Clay Donahoe, Nye, Billings region; Lyle Nelson, McCone County, Glasgow region, and Don Hartman, Miles City, Miles City region.

Each received a framed plaque, one-year subscription to *Montana Outdoors* and a 1975 Wildlife Calendar in recognition of their efforts.

book reviews

SKETCHES OF WALKERVILLE: The High and Mighty by Beverly J. Brothers, Ashton Printing & Engraving Co., Butte, Mont.; 1973, 83 pages, no price listed.

Although Montana has many historic mining towns, most of them have become ghost towns before their histories could be written and the knowledge and recollections of local residents were unfortunately lost forever.

It is encouraging to read a local history written while memories are still fresh and buildings still stand. From the first page of "Walkerville," it is easy to see that Beverly Brothers has a great affection for her home town—enough to write a book about it. It makes one wonder how much more we could know today about places like Bannack, Granite, Zortman and Castle if one of their residents had done the research Mrs. Brothers did.

The book is well done for a first attempt and the history follows logically from chapter to chapter. The copious use of old photographs adds greatly to the narrative, but photographs of people are over-used. For example, two full pages of photos of grade school classes are included.

Although Mrs. Brothers' familiarity with and affection for her subject were the reasons she wrote the history, these same ingredients sometimes make difficult reading for anyone not familiar with Walkerville and mining. Her use of clichés such as "God's country," "the high and mighty," "diamond in the rough," and inadequate explanations of mining terms such as "quicksilver" and "free ore" make one feel that the book was written to be read only by Walkerville residents.

Many of these difficulties and numerous typographical errors should have been corrected by a good editor.

A map of the townsite of Walkerville would be helpful since the photographs and narrative do not adequately show how each building mentioned relates to the others.

Mrs. Brothers also failed to discuss possibilities for Walkerville's future. Will it be gobbled up by an open pit mine, or will much of it remain as it is? What is the population trend?

I would recommend Beverly Brothers' book to anyone familiar with Walkerville. It is an interesting account of the town's development. However, if you are not at least a little familiar with mining and the Walkerville-Butte area, try some introductory Butte area mining history before tackling "Walkerville."—*Dave Conklin*

contributors

It's about time more attention was given to the multitude of nongame species which share man's environment—and Dennis Flath does just that in his article, "We've Never Met an Animal we Didn't Like," beginning on page 2. As the department's new nongame and threatened species wildlife biologist, Flath is certainly qualified to explain the nongame species program. Before taking the new position, Flath was a game management biologist for the department in Libby. He holds a B.S. degree in biology from Pacific Lutheran University in Tacoma, Wash., and a M.S. in wildlife biology from the University of Montana, Missoula.

We're pleased to print a guest editorial by Gary Wicks, director of the Department of Natural Resources and Conservation. The editorial is a summary of lengthy testimony he presented at the Federal Energy Administration's hearings on "Project Independence." Before assuming the directorship of DNRC in 1971, Wicks was administrative assistant to former Gov. Forrest H. Anderson. He holds a B.A. degree in history and political science from the University of Montana and has completed course work for a Master of Business Administration degree, also from U.M. His editorial, "The End of Living and Beginning of Survival," begins on page 7.

Tina Torgrimson kicks off this issue's special section—"Where is Montana Growing?"—with a historical perspective for land use in Montana. She headed the subdivision inventory study for the Environmental Information Center and was research assistant for the Environmental Quality Council in 1973-74. She holds a B.A. in journalism from the University of Montana where she edited the student newspaper, the *Kalmin*. An avid fly-tier, Torgrimson also enjoys photography. Her article, "A Look Back," begins on page 12.

The Environmental Quality Council's "Montana Land Use Policy Study" will help guide both the tone of legislative discussions and the shape of land use law that may emerge from the 44th Legislative Assembly. The editor of the study, Ronald J. Schleyer, asks if land demands continue to increase, how long will Montana's treasure last? Schleyer is environmental impact statement coordinator for EQC. He holds a degree

in journalism from the University of Montana and also studied mechanical engineering at Montana State University, Bozeman. His part of the special section, "Land Use Study," begins on page 34.

Questions with difficult answers are posed in Bill Cunningham's article on page 18 of MO's "growth" section. Is growth benign or malignant? Is it inevitable? Has blind acceptance of the "growth is good" philosophy already decided Montana's future? Cunningham explores and examines the answers and their implications for the future. He holds a B.S. degree in forestry and a M.S. in resource planning, both from the University of Montana.

The right of individual states to manage resident fish and wildlife on federal lands is at stake. The problem also involves controversial subjects such as anti-hunting sentiment, gun control and increases in nonresident hunting fees. Harley Yeager ties it all together in his article, "The Federal Take-Over," beginning on page 43. He is the regional information officer for the department in Great Falls and held similar posts in Glasgow and Billings.

"Happiness is a Haystack," at least if you're a pika. About the size of a hamster, the furry little fellows depend on their "haystacks" for winter sustenance. Vern Craig, well-known to readers for his witty cartoons, tells all about the pika in his article, beginning on page 46. He is the special assistant in the department's environment and information division.

We welcome guest editorialist George F. Grant to *Montana Outdoors*. Grant is editor of *The River Rat*, official publication of the Rocky Mountain River Rats (Butte's chapter of Trout Unlimited). The author of two books on fly tying, Grant has spent countless hours tying flies and trying them out in numerous Montana waters. He is the western staff member for the Museum of American Fly Fishing and recently won the fly fisherman's most coveted prize, the Wayne Buszek Memorial Award, presented by the Federation of Fly Fishermen. His editorial, "How Many Miles of 'Unbeatable Trout Streams' Left?" begins on page 48.

THE FEDERAL TAKE-OVER

by Horley Yeager

Most Montana citizens don't realize that the fate of our fish and wildlife is being tossed around by congressional committees in our nation's Capitol. At stake is the state's right to manage resident fish and wildlife on federal lands. Legislation to prohibit hunting on public lands is also showing up in Washington, D.C. And even more frightening is the support this legislation receives.

What does all this mean to Montana sportsmen? (1) Approximately one-third of Montana's 94 million acres is public land, primarily administered by the Forest Service (FS) and the Bureau of Land Management (BLM). (2) These public lands, owned by all U.S. citizens, contain a fair share of Montana's fish and wildlife. (3) These same lands receive increasing use by resident and nonresident sportsmen as fee hunting, no hunting/no fishing signs and other demands on the land decrease the number of places open to hunting and fishing.

Now, add to this situation the findings of the Public Land Law Review Commission (PLLRC) in its 1970 report to the President and Congress, and it becomes apparent why Montana and fish and game agencies in other western states are troubled—and why sportsmen should be concerned.

The PLLRC report charged public land states (Montana and 12 other western states) with discriminating against nonresident hunters through license fee differentials and various other regulations.

Montana asks \$151 for a nonresident license, good for two deer, an elk, bird hunting and fishing. Montana residents pay \$18.25, a resident to nonresident ratio of more than 1 to 8.

For several years prior to the 1974 hunting season, Montana game wardens enforced a guide law recently declared unconstitutional by Montana's Fifth District Court in Ennis. This law required all nonresidents hunting game animals on any national

forest, wilderness area, national game refuge or state game range to be accompanied by a licensed Montana outfitter, professional or resident guide.

The constitutional question of Montana's guide law rests before the State Supreme Court and unless a reverse decision results, the law for all practical purposes is dead.

But the guide law wasn't the only PLLRC recommendation affecting Montana. The PLLRC recommended against federal aid programs to states until reasonable fees are implemented. Further, "State policies which unduly discriminate against nonresident hunters and fishermen in the use of public lands should be discouraged."

If federal aid was withheld because of so-called discriminatory fees or policies, Montana would lose nearly \$2 million in fish, wildlife and hunter safety funds annually. This would drastically reduce or curtail needed land acquisition, site development, habitat improvement, research and hunter safety programs.

The kicker is who defines "reasonable" or determines what are "acceptable" nonresident fees.

The PLLRC answer is a federal land use fee for hunting and fishing on all public lands.

Following the release of the PLLRC report, Harry R. Woodward, president of the Western Association of State Game and Fish Commissioners, asked the Wildlife Management Institute (WMI)—a private organization based in Washington, D.C.—to study the nonresident hunting situation in the 13 public land states. (Fishing fees were later included.) The purpose of the study was to recommend a common course of action for states to use in attempting to resolve the complex nonresident license fee controversy.

Results of this study were released in July 1971. Briefly stated, the WMI recommended hunting license fees be set on a 1 to 5, resident to nonresident

continued



*Are Montanans unknowingly encouraging
federal control of wildlife management?*

ratio. This ratio was derived by figuring the ratio of resident to nonresident hunter fees in the 37 states outside the western association. This ratio was 1 to 5.5 for small game and 1 to 4.6 for deer.

The institute study concluded that an average differential of 1 to 5 was fair and reasonable for the nonpublic land states and therefore should be applicable to public land states. In addition, it suggested the 1 to 5 ratio apply only to license fees, while decisions about hunter numbers should be set by individual states, based on the biology of the wildlife species involved.

The institute's recommended ratio of fishing license fees is a 1 to 3 resident to nonresident differential.

Present Montana fishing license fees are \$5 for resident and \$20 for nonresident—a 1 to 4 ratio. (A prerequisite conservation license [\$1] is needed by both residents and nonresidents.)

The WMI assumed a totally different viewpoint than did the PLLRC regarding a federal license to hunt or fish on public lands. Their report stated that the effects of removing the state's right to license all sportsmen on public land and substituting a federal license would be a catastrophe for the fish and wildlife resource. The report continued, "All public land boundaries would have to be marked promptly and the lands patrolled by a large number of federal enforcement agents."

This is an impossibility under present land ownership patterns and federal budgeting procedures for two reasons: (1) Many parcels of public land are scattered and isolated by private lands and (2) Congressional appropriations to federal agencies for fish and wildlife resource programs on public lands are only token amounts of what is needed. "The states would lose much revenue and most incentive to provide state-purchased winter range for the animals," the report continued.

The institute findings also indicated that state wildlife research would be curtailed or eliminated. And a great build-up of personnel would be necessary to offset the present services provided by state wildlife agencies, the report said. Countless legal problems would develop with a federal license and the final outcome of this move would be destruction of the present management system for western wildlife, the report said.

Rapidly spreading anti-hunting and anti-gun attitudes further compound the problem of a possible federal take-over of fish and wildlife on public lands.

These same attitudes aided passage of the 1972 Marine Mammal Protection Act by the U.S.

Congress. This bill pre-empted Alaska's right to manage the polar bear, including hunting. The federal government took charge instead.

Since passage of the Endangered Species Act of 1974, the office of the Secretary of the Interior has been requested to place the grizzly bear on the endangered species list—a prerequisite for federal take-over of grizzly bear management. Such a move would ban grizzly hunting in Montana. In addition, the FS is under pressure to close all national forests to grizzly hunting.

If this happens, what animal would anti-hunting groups go after next—the Rocky Mountain sheep or deer? "No," you say. When was the last time you noticed the animals portrayed on check blanks or on lists as endangered species?

In a country of 210 million people and only 16 million hunters, these anti-hunting sentiments shouldn't be taken lightly. Consider, for example, the public impact created by anti-hunting shows. Movies like "Bambi," "Bless the Beasts and the Children," "Born Free;" television documentaries like "Say Goodbye" and television programs such as "Born Free" distort the role of the hunter or create anti-hunting attitudes.

A recent study of anti-hunting sentiment financed by the National Rifle Association sheds considerable light on the subject. Hand-delivered questionnaires were given to 937 students from 10 colleges and universities in different areas of the U.S. Results showed that three-fourths of those interviewed held some degree of anti-hunting sentiment. The report stated, "Increasing anti-hunting sentiment, in general, appears to be related to urbanization, disassociation with the land, and a trend toward the adoption of a preservationist philosophy toward all natural resources." The survey also showed that despite their anti-hunting sentiment, sport hunting won approval by a margin of 4 to 1 among males and 6 to 4 among females. As far as media influence affecting or creating an anti-hunting sentiment among the students, 38% listed television, 20% movies and 18% magazines.

Also creating an impact on the American people is the smear campaign of anti-hunting groups like "Friends of Animals," headed by Alice Herrington and a host of movie stars. Next, consider the anti-hunting efforts of the Humane Society of the United States.

Appearing at the 1973 winter workshop of the American Association for Conservation Information (AACI) meeting in Great Falls, Mont., was John A. Hoyt of the society. He said the society believes that hunting can only be justified on the grounds of



Are Montanans unknowingly supporting
the anti-hunting and anti-gun movement?



illustration by Vern Craig

obtaining necessary food or other products, reducing animal populations (by professionals, not sportsmen) and in cases where animals are destroying property.

"What must we do to counteract the anti-hunting movement?" was a question posed at the 1972 AACI workshop in Casper, Wyo. The delegates from various state conservation publications had already agreed that the anti-gun movement and anti-hunting push on public lands were linked. To counteract this movement, each state decided to provide facts concerning the management of wildlife, game and nongame species to the media.

If this deterrent for anti-hunting attitudes is going to work, the states had better shift into high gear! Several courses of possible action were recognized by the WMI in its report of the nonresident fee/public land hunting and fishing controversy: (1) charge residents and nonresidents equal fees and give them equal recreational opportunities, (2) maintain the status quo with existing fee differentials and restrictions on nonresidents, (3) define reasonable fees and restrictions and initiate long-term adjustments to attain them (4) increase fees, quotas and other controls to severely limit nonresidents or (5) eliminate the nonresident.

How well any one of these fee possibilities is accepted depends on "whose ox is being gored." Many residents take a "provincial" or "lock it up" attitude when it comes to sharing game with nonresidents. This attitude would probably be more palatable to nonresidents if residents confined it solely to private and state-owned land. But when the attitude of game for the exclusive use of residents

carries over to public lands, nonresidents frequently complain that it's goring *their* ox. And, more nonresidents want to hunt and fish on Montana public lands than there are Montana residents trying to keep them out.

Then, consider the numbers of senators and representatives—voting power—these nonresidents have in Congress compared to Montana and the other 12 public land states. Unless Montana and the other public land states provide more equitable conditions for the nonresident sportsman, control of hunting and fishing may be removed from states' hands. Similarly, if present anti-hunting attitudes prevail or grow stronger, *all hunting may be curtailed on public lands.*

With less than 10% of all U.S. citizens hunting and the proportion decreasing each year, now is the time for both resident and nonresident hunters to join forces and squelch the anti-hunting movement. But instead of joining, these two groups grow further apart. Legislation restrictive to the out-of-stater and exorbitant nonresident license fees continually crop up and occasionally pass state legislatures.

During the last two Montana legislative sessions, bills raising the \$151 license fee to as high as \$500 were introduced. Although killed, they received considerable support. Watch closely what happens during 1975 and future sessions. While attempting to control nonresident sportsmen by state statute, we may contribute to movements that either remove state control of nonresident sportsmen on public lands or all hunting on public lands. 🐾



Are Montanans finally ready to treat nonresident sportsmen fairly to avoid disaster?

Happiness is



a Haystack

— the pika —

story by Vern Craig

photo by Danny On

As Montana's mountain landscape fades from autumn's blazing hues into a white winter mantle, most larger animals drift into lowlands where the elements are less severe. Others curl up to sleep out the cold weather. The high country is left to winds that whip plumes of snow from frozen peaks and carry them wailing into snow-choked cirques. Still, this forbidding environment isn't entirely deserted. Beneath the deep snows, secure from bitter cold and piercing winds, little pikas wait out the winter in relative comfort.

Pikas apparently received their name from a tribe of people in northern Siberia, the Peeka. Their scientific name is *Ochotona princeps*, but locally they are known as conys or rock rabbits. About the size of a hamster, the small mammals possess broad, rounded ears and only vestiges of a tail. Unlike their close kin, the rabbit, front and back legs are about the same length. Color ranges from a soft gray to brownish and blends magically with the jumble of rocks in which they normally live.

In Montana, pikas dwell in the rubble of rocks plucked by ice and gravity from stony heights. They inhabit areas ranging from 13,000 feet elevation in New Mexico to near sea level in Canada and Alaska. Subspecies live in lava fields of eastern Oregon, southwestern Idaho and eastern California. Pikas which closely resemble the Montana branch of the family are found throughout Asia.

Pika habitat in Montana is usually characterized by short summers and long, bleak winters. Since pikas neither hibernate nor migrate, providence urges them to store food for the lean months. During late summer, they anxiously begin to harvest nearby

vegetation. Hesitant to leave the safety of their rocks, they venture only as far as necessary to find food.

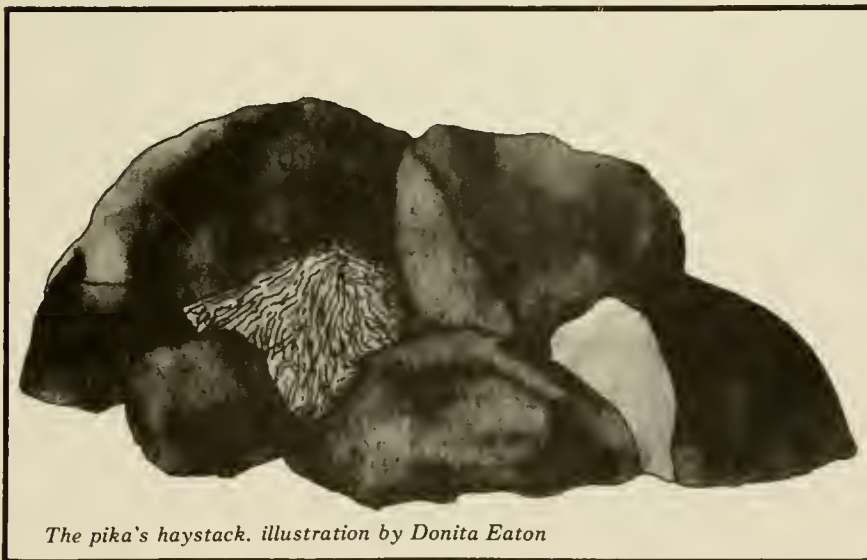
Quantities of blossoming herbs (weeds), lichens, nettles, thistles, grasses, huckleberry, raspberry, rose, sagebrush, serviceberry, snowberry, leaves and twigs of trees and pine needles are gathered and stacked in "haystacks" for curing. The piles are generally placed against overhanging rocks for shelter from rain and melting snow. New haystacks may be built on remains of an older one not completely consumed during the previous winter.

The pika's home ground may easily go undetected unless one watches for telltale clues. Hikers clamoring over rock slides frighten the shy animals into hiding, while other pikas seem to melt into the broken, gray boulders. One giveaway is a distinctive, almost bleating call. Most activity occurs from sunrise to about 11 a.m., so that's the opportune time to search and listen for the pika.

Feces, similar to those of rabbits except much smaller, and white streaks left on rocks by urine indicate pika territory. During late summer and fall, stacks of winter forage and pathways leading to hayfields are clues.

Populations of the little mammals apparently do not become dense, like those of ground squirrels and prairie dogs. Results of one study in Yosemite National Park estimated six pikas per acre in their normal habitat. In many locales, a sparsity of vegetation probably results in a limited population. Reproduction is not prolific, generally three or four young per year. Time of birth varies from late May into early September. Weasels, and in their range marten, are perhaps the most successful predators.

When winter descends on Montana and the highest peaks are shrouded in swirling storms, the pika will still be there, snug beneath a blanket of snow and secure in the knowledge of an ample larder. 🐾



The pika's haystack. illustration by Donita Eaton

editorial

how many miles of "unbeatable trout streams" left?

the following guest editorial was written by George F. Grant, editor of *The River Rat*, official publication of the Butte chapter of Trout Unlimited. It first appeared in the July/August 1974 issue of that publication.—ED.

An ad currently appears in national magazines which is part of an advertising campaign conducted by the Montana Department of Highways to bring many tourists to Montana during the summer months. It is based on the excellence of our fishing.

It is, indeed, fortunate that Montana has such great trout fishing that it brings thousands of dollars into the business community of our state. The people come. They enjoy themselves. They leave their nice money. They return from whence they came. And Montana is almost like a pleasant dream in its simplicity and lack of undesirable aftereffect.

Perhaps the rude awakening has not yet become apparent because we are still asleep. Executive, legislative and judicial Montana is either not aware of what is happening to the great trout streams of this state, or they simply do not care.

State government turns a deaf ear toward the warnings of fishermen and preservationists. It views the future with myopic vision that can see the necessity of industry to pollute, but is blind to

the public's right to clean water and recreation. It seems to recognize the importance of the tourist industry but fails to realize that these trout streams are the backbone of that industry.

Montana is so proud of its trout fishing that it is willing to broadcast to the world through the medium of national magazine advertising: "Montana has a reputation. People say we have the nation's best fishing."

Why then is Montana so unwilling to protect this great natural heritage that brings so much recreational and economic benefit to its own people and to others as well?

It is difficult to understand how a state that professes such pride in its trout streams can treat them so badly. How long will they be able to say in their pulse-quickening ads—"4,000 miles of unbeatable streams"?

This statement is not nearly as true as it was in 1950; even less true in reference to 1960 and now it would have to be written by a man poorly informed or one with tongue-in-cheek. The Montana Department of Fish and Game says in a recent report: "For example, fishery workers examined 160 miles of stream on Beaver, Lolo and Rock creeks and the Big Hole, Jefferson and Ruby rivers last summer [1973]. They found 24 miles (15%) of channel alteration with dragline or bulldozer, most of it by private individuals. And this was only on six streams! Add the rest of Montana's important trout producers like the

Bitterroot, Clark Fork and others, and you begin to understand the magnitude of the problem."

Fifteen per cent of 4,000 is 600 and this is conservative—it is probably much higher. The 4,000 miles now becomes 3,400. Consider also that at least 25 % of the land along these streams is inaccessible to wading fishermen because of posting, and the figure dwindles to about 2,500. The completion and filling of Libby Dam wiped out 50 miles of the Kootenai River, further reducing the total. The Yellowstone River, from Gardiner to Colstrip, is in grave danger of losing its status as trout water—another 150 miles lost. The Boulder and Stillwater would not be long in following.

Recently the following headline shocked and dismayed trout fishermen in the vicinity of Helena and caused indignant reaction throughout the entire state: "Thousands of Fish Killed Near Helena."

The story accompanying the headline detailed how alkaline escaping from settling ponds at a cement plant had entered Prickly Pear Creek with such toxic content that it had resulted in the death of thousands of wild brown and rainbow trout. There was little doubt that the allegations were true and the extent of the destruction of fish life fully confirmed.

This occurred in January 1974 and no action was taken while public indignation was allowed to subside. The State Board of Health convened in May 1974 and by an overwhelming vote refused to pursue legal action against the offending firm because the investigation failed to prove that the firm had willfully caused its waste retention dike to break under pressure of runoff from a sudden midwinter thaw. This decision was reached despite the fact that the state water code says: "It is illegal to dispose of any waste in such a manner that it will be likely to enter a stream."

The entire incident is an object lesson in what is certain to happen over and over again during the coming years, since industry has now been assured that the law will not be enforced.

(In reference to the Prickly Pear Creek fish kill, the Department of Health and Environmental Sciences recommended prosecution of Kaiser Cement. Our department supported this move. However, the Board of Health and Environmental Sciences disagreed and decided against any legal action. An offer by Kaiser to pay for restocking the creek with fish, and our counter suggestion that the money be invested in a permanent solution to Prickly Pear Creek's many water pollution problems, never became reality. — Ed.)



A channel clearance project on the West Gallatin River, parts of which are classified as a blue ribbon trout stream. F&G photo by Don Bianchi



**WILL MONTANA LOSE CONTROL
OF WILDLIFE ON PUBLIC LANDS?**

—see page 43